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MODERN HOUSES

BY
R.W.
SIMPSON



BEAUTIFUL HOMES

EMBELLISHED BY MORE THAN ONE
THOUSAND ILLUSTRATIONS. PRICE, \$5.

PUBLISHED BY THE CO-OPERATIVE BUILDING PLAN ASSOCIATION, ARCHITECTS, 63 BROADWAY, NEW YORK.

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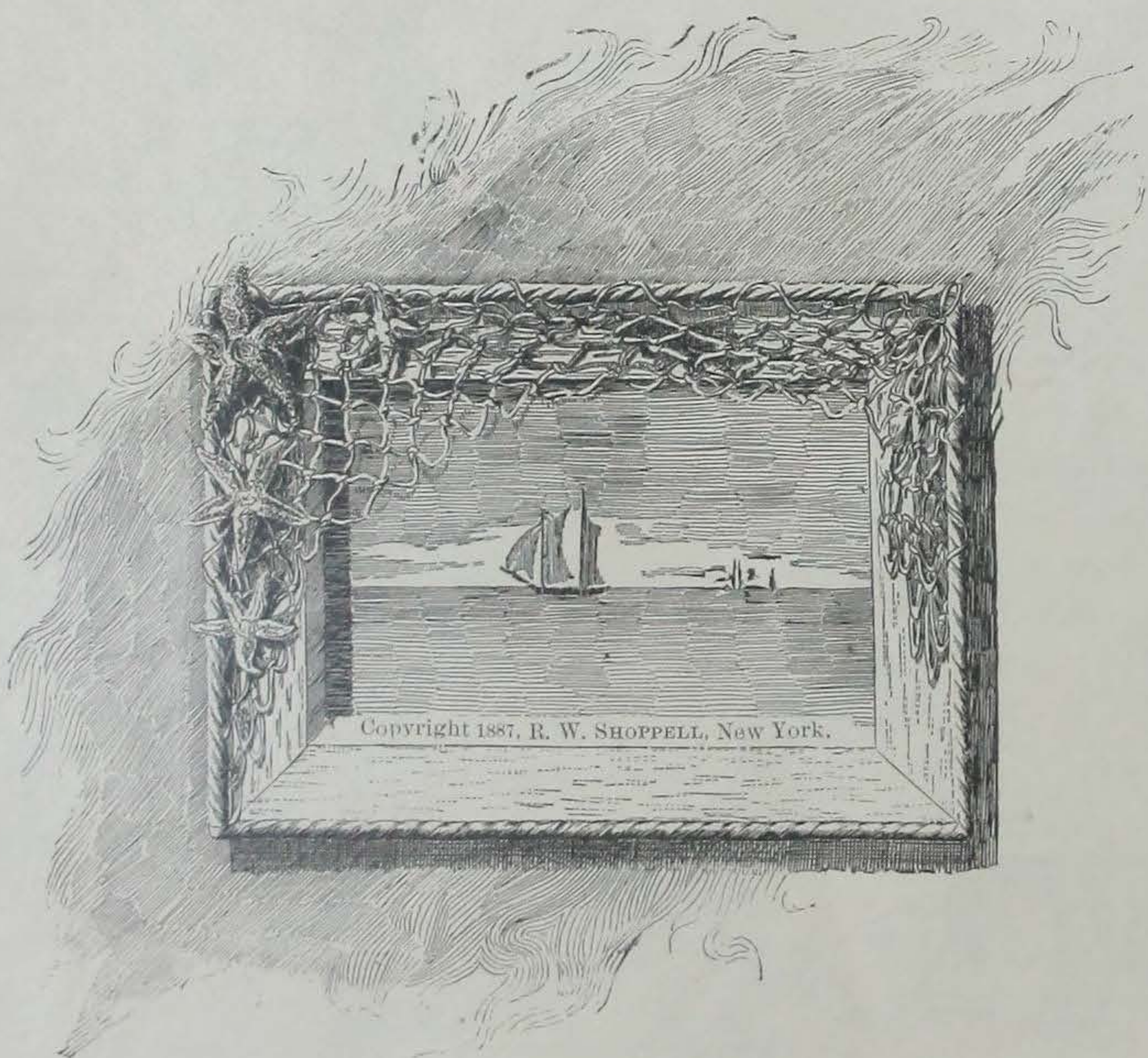
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Publisher's Preface

A work of paramount usefulness is difficult to talk about. To describe it with adequate phrases sounds like exaggeration: to disclaim its importance is false modesty, and to pass lightly over its claims does the work an injustice.

The best way, perhaps, is to let it speak for itself. That is the course we shall pursue, after briefly calling attention to some points that may be of assistance to the reader.

While this is a work of literary merit, splendidly embellished with more than one thousand illustrations, finely printed and well bound, making it an attractive addition to any library, or a beautiful ornament for any table, its special claim is that of *extreme practical utility*.

Those who may wish to build houses, or who may wish to know the value of houses of different sizes, will find here more than two hundred and fifty designs illustrated and fully described.

Those who may wish to build barns, ice-houses, green-houses, etc., will find many approved designs.

Those who may wish to acquaint themselves with the most approved methods of heating, ventilating, plumbing, sewage and kindred subjects, will find here the best advice from the best authorities.

Exterior painting in modern styles is very fully treated by colored plates and full descriptions.

After building the house, the decorating and furnishing of it is very fully treated, taking up each room and going into the fullest details. This information applies equally well to the redecorating and refurnishing of old houses. This department contains many suggestions and practical receipts of great value.

To facilitate the business of building and of dealing in real estate, a department of legal forms is given, with brief statements of the laws of the different states relating thereto.

The illustrated history of the "Habitations of Man in all Ages," as a part of this work, is not only extremely interesting from a literary point of view, but it contains many valuable suggestions which, those who seek after improvements and novelties may well consider and perhaps incorporate with their plans for modern dwellings.

Hundreds of items of information relating to the subject of

modern houses, that do not appear in the index, are incidentally given with the descriptions of the plans and in the different departments. This work might well be called a cyclopedia. Reference to its pages will give information on almost all matters relating to the subject. Many a fee for consultation may be saved by those who refer to this book.

In examining the plans with the view of adopting one, the examiner should bear in mind that reducing sizes of rooms, cutting off extensions, etc., of a high cost house often supplies the most satisfactory plan for a low cost house.

Those who wish to remodel and improve old houses may find many gables, roofs and exterior features, as well as floor plans, that can be applied, with slight modifications, to the old houses. The large number of designs given in this work makes it peculiarly useful for this purpose.

Regarding the costs of structures given, they are based on prices for material and labor that are also given. In places where material and labor are higher or lower, the costs of structures will be affected accordingly. But it is safer for the intending builder to simply consider these costs as approximate, for there are other things that affect costs. Labor troubles may be apprehended and prices for materials may be advancing. As the builder assumes these risks, he must add a little to current prices in making up his estimate. Besides, he must have his profit. The lowest bidder is not always the cheapest. The careful and conscientious builder uses the very best materials, employs the best workmen and does not "rush" the work. The house he builds will not need repairs for years.

The publishers of this work will cheerfully acquaint the intending builder at any time with the revised and latest figured costs of any of the designs. In connection with this important subject of cost, the publishers desire to say that they have supplied to many of the most enterprising builders all over the country a large technical work called *The Builders' Portfolios*, which familiarize such builders with the details of our designs so accurately that they can figure very closely for contracts.

As the value of an architectural work depends greatly on the confidence its readers repose in its statements, we beg to call attention to the references printed on the last pages.



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ARCHITECTS

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Said particulars will be entered in the books of the Association, identifying the purchaser, and securing to him, should he desire it at any time, free consultation regarding any of the designs in this book.

This privilege greatly enhances the value of an architectural work. The Publishers stand ready to explain anything that is not understood; to advise about the practicability of modifications, differences in cost, etc., etc.

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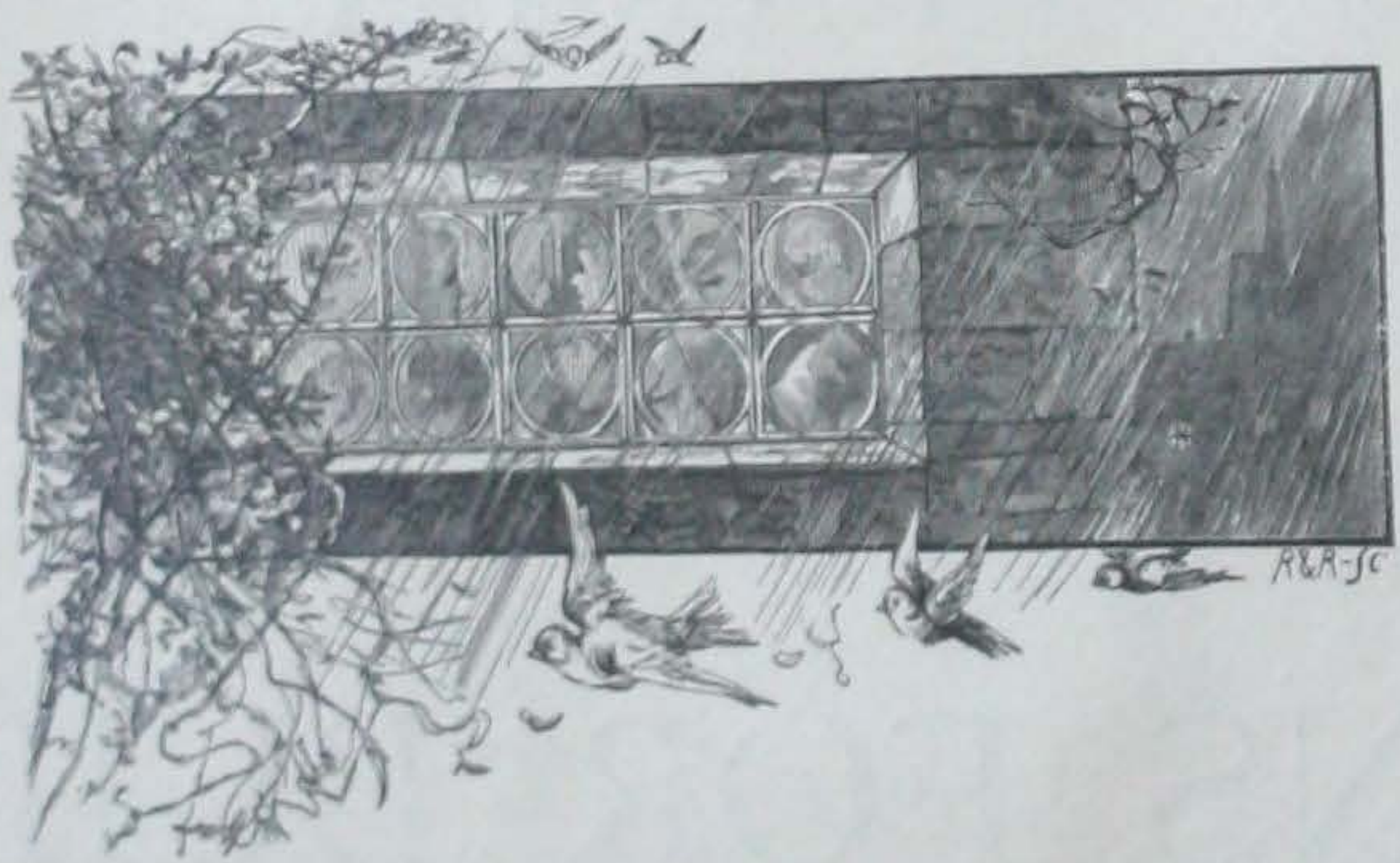
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PART I

DESIGNS FOR BUILDINGS



WORKING PLANS, DETAILS, SPECIFICATIONS, &c.

See notes below about Alterations and Special Designs.

A MODERN HOUSE—that is a house in which the advances in science and art are utilized—*cannot* be constructed without the aid of

WORKING PLANS, DETAIL DRAWINGS AND SPECIFICATIONS.

In fact this is true as regards the smallest, cheapest and plainest building, but it is doubly true as regards the Modern House, because most of the details of construction and finish differ greatly from those of the old-fashioned, and even from those of a so-called Modern House which is not well designed.

The principal convenience of a Modern House arises from the studied and improved arrangement of its rooms, but its distinguishing beauty comes from correctly carrying out the Details of Cornices, Verandas, Windows, Doors, Gables, Trim, Mantels, Staircase, Colors, &c., &c. Builders are not familiar with these Details, and it is simply impossible for them to construct them without exact Drawings and Specifications.

This is exactly the service we offer in our Working Plans, Details, &c. By the practical co-operation effected by our books bringing our designs before thousands of people, we are enabled to supply this service at *one-quarter* the rates usually charged by architects. At the same time, our services are more complete than are usually furnished; our figures and estimates are more reliable because they are continually proved by actual building.

When Drawings, &c., are used (insuring against mistakes and waste of both material and time), the Modern House costs no more, and often less than the old-fashioned structure; for the architect has not only improved the arrangement and made the Modern House beautiful, but he has studied economy and insured its lower cost.

Many people think it an unnecessary expense to invest in Plans, &c.; that their builders can draw up Plans or follow rough sketches of their own. *This is a great Error.* It would be true economy to pay even five times as much as our charges for proper Drawings, &c. Without them mistakes are sure to occur, and to rectify a single mistake often costs more than the architectural services

Again, by our Specifications, the builder is bound to put in good qualities of material and workmanship; when not carefully specified in every particular there is sure to be misunderstandings and trouble as to the thousand-and-one things that enter into the construction; the result is always loss to the owner. There are many honest and conscientious builders, but there are others, unfortunately, who do not hesitate to take advantage of loosely-drawn Specifications or oral instructions, as many owners have found out to their sorrow. We make it our particular business, by very exact Drawings, Specifications and Contracts, to insure good materials and workmanship.

The honest builder always prefers to have clear and exact Drawings and Specifications that no misunderstanding may occur either on his part or that of the owner.

Beside the indispensable aids of Plans, Details and Specifications, there is the utmost value in having

A BILL OF QUANTITIES,

which gives the true quantities of all the materials required, and enables the owner to make all of the purchases of materials, if he prefers, and to build the house by day's work.

In addition to the foregoing we furnish

A COLOR SHEET,

which gives a number of elevations properly colored, with directions for mixing and applying the paints, the right kind of brushes to use, &c. This sheet not only instructs the painter, but enables the owner to do his own painting, if he prefers.

We also send an extra sheet containing Detail Drawings of an approved method of building cheap, durable and firm foundations, particularly useful for small cottages, where it is necessary to keep the cost as low as possible. The same sheet shows drawings of an approved cistern with filter. Also, duplicate blank forms of

BUILDING CONTRACTS

ready for use in case the owner wishes to build by contract.

The reliability and thoroughness of our work is attested by hundreds who have built from our Drawings and Specifications. Please see a "page of references" in another place.

PRICE LIST OF PLANS, SPECIFICATIONS, ETC.

UPON receipt of price annexed we will send by mail or express, charges prepaid, the Working Plans, Specifications, Detail Drawings, Bill of Quantities, the Extra Detail Sheets on Colors and Foundations mentioned above, and Building Contracts for any of the designs mentioned below. Remit to The Co-operative Building Plan Association, No. 63 Broadway, (P. O. Box 2702), New York City, N. Y.:

Design No.	Price for Working Plans, &c.
168.—A	\$920 frame cottage. \$20 00
169.—	800 " 15 00
170.—	410 " 12 00
171.—	458 " 12 00
172.—	1,500 " 24 00
173.—	1,350 " 24 00
174.—	1,400 " 24 00
175.—	1,160 " 20 00
176.—	1,490 " 25 00
177.—	1,120 " 20 00
178.—	1,285 " 22 00
179.—	1,950 double house. 30 00
180.—	1,500 frame cottage. 25 00
181.—	1,375 " 22 00
182.—	1,375 " 22 00
183.—	1,100 " 20 00
184.—	1,520 " 25 00
185.—	1,800 " 28 00
186.—	1,650 " 25 00
187.—	1,500 " 25 00
188.—	925 " 20 00
189.—	1,875 " 28 00
190.—	1,200 " 20 00
191.—	1,875 " 28 00
192.—	1,500 " 25 00
193.—	1,850 " 28 00
194.—	2,100 " 30 00
195.—	2,075 " 30 00
196.—	2,100 " 30 00
197.—	2,575 " 30 00
198.—	1,950 " 30 00
199.—	1,750 " 28 00
200.—	1,975 " 30 00
201.—	2,250 " 30 00
202.—	2,850 " 35 00
203.—	1,800 " 28 00
204.—	3,000 " 35 00
205.—	2,500 " 30 00
206.—	2,900 " 30 00

Design No.	Price for Working Plans, &c.
207.—A	\$2,800 frame cottage. \$30 00
208.—	3,400 " 40 00
209.—	2,200 " 30 00
210.—	2,800 " 35 00
211.—	2,600 " 30 00
212.—	3,700 " 40 00
213.—	3,475 frame tenement 40 00
214.—	3,500 frame house 35 00
215.—	3,600 " 45 00
216.—	2,550 " 25 00
217.—	3,200 " 40 00
218.—	3,500 " 45 00
219.—	3,500 " 45 00
220.—	3,900 " 50 00
221.—	3,500 brick house 45 00
222.—	2,750 frame house 35 00
223.—	5,200 " 70 00
224.—	3,400 " 40 00
225.—	4,200 " 50 00
226.—	4,300 " 50 00
227.—	4,400 brick house 60 00
228.—	3,700 frame house 45 00
229.—	2,500 " 35 00
230.—	5,700 " 90 00
231.—	4,450 " 50 00
232.—	3,900 " 45 00
233.—	4,500 " 50 00
234.—	3,900 " 45 00
235.—	5,100 " 70 00
236.—	5,900 " 90 00
237.—	4,500 " 60 00
238.—	5,800 " 90 00
239.—	6,800 brick house 125 00
240.—	6,700 " 125 00
241.—	5,800 " 100 00
242.—	6,500 frame house 125 00
243.—	6,000 stone church 150 00
244.—	12,000 frame rink 250 00

* The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1835. In most other localities the cost is less—in some places much less. A different date also modifies cost.

NOTE ABOUT ALTERATIONS

ANY internal changes required, such as shifting partitions to make rooms larger or smaller, adding closets, building fireplaces in place of flues, etc., can be clearly indicated to the workmen by the owner himself, when the large Working Plans are spread out before them. Therefore, if the alterations are unimportant, the Working Plans and Specifications as per price list above are quite sufficient. Where the desired changes alter the external dimensions and, consequently, the appearance of the elevations, it is generally advisable to have us make the changes in the Working Plans and Specifications.

We do not set a price for making alterations, as we cannot tell how much work is involved until we know what they are. Upon receiving a description of the alterations required, which should always be accompanied with a diagram, no matter how roughly drawn, we will make a price according to the amount of work involved.

ABOUT SPECIAL DESIGNS

IF none of our designs, or modifications of them, suit the intending builder, we are glad to make original designs to meet their requirements, or work out and put in proper shape any rough drawings of their own.

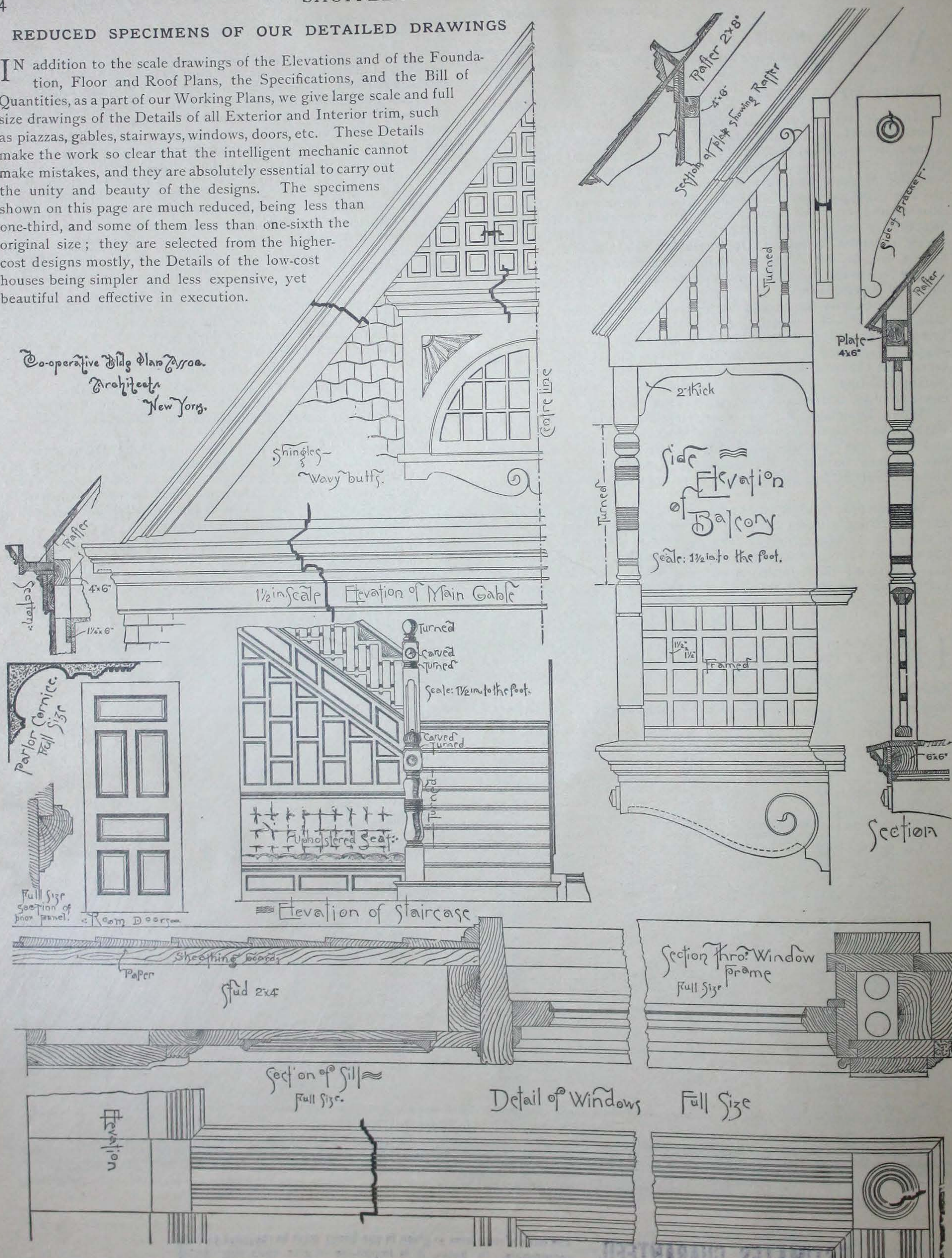
ESTIMATES GUARANTEED.—The costs of structures as given in our books must be regarded as only approximate. In books, it is impossible to give costs that would prove to be correct for every locality. Therefore, from and after this date, for those who order Working Plans, Specifications, Etc., for any designs found in our books, we will make careful, special estimates for each design, based on their local prices for materials and labor. We will guarantee that ~~any~~ ^{any} can be paid a fee not exceeding such estimates, otherwise our clients may send back to us the Working Plans, Specifications, Etc., and we will return to them the fees paid for the same.

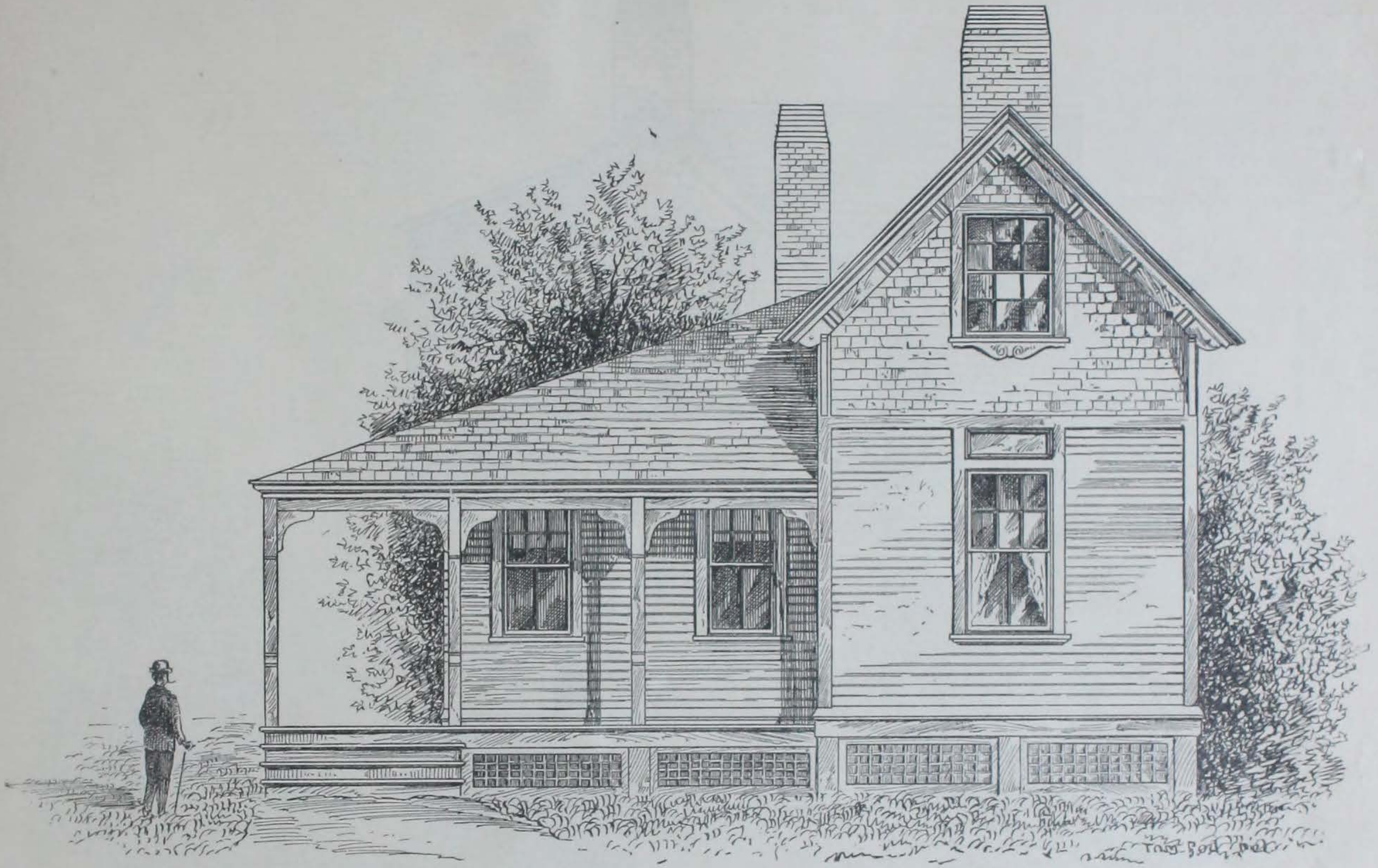
January 1, 1838.

THE CO-OPERATIVE BUILDING PLAN ASSOCIATION, ARCHITECTS 63 Broadway, N. Y.

REDUCED SPECIMENS OF OUR DETAILED DRAWINGS

IN addition to the scale drawings of the Elevations and of the Foundation, Floor and Roof Plans, the Specifications, and the Bill of Quantities, as a part of our Working Plans, we give large scale and full size drawings of the Details of all Exterior and Interior trim, such as piazzas, gables, stairways, windows, doors, etc. These Details make the work so clear that the intelligent mechanic cannot make mistakes, and they are absolutely essential to carry out the unity and beauty of the designs. The specimens shown on this page are much reduced, being less than one-third, and some of them less than one-sixth the original size; they are selected from the higher-cost designs mostly, the Details of the low-cost houses being simpler and less expensive, yet beautiful and effective in execution.





DESIGN No. 168. FRONT ELEVATION

DESCRIPTION OF DESIGN NUMBER 168*

SIZE OF STRUCTURE: Front, 32 ft., 6 in. Side, 34 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 10 ft.; Attic Story, 8 ft.

MATERIALS: Foundation, posts set in concrete. First Story, clapboards; Second Story, shingles; Roof, shingles.

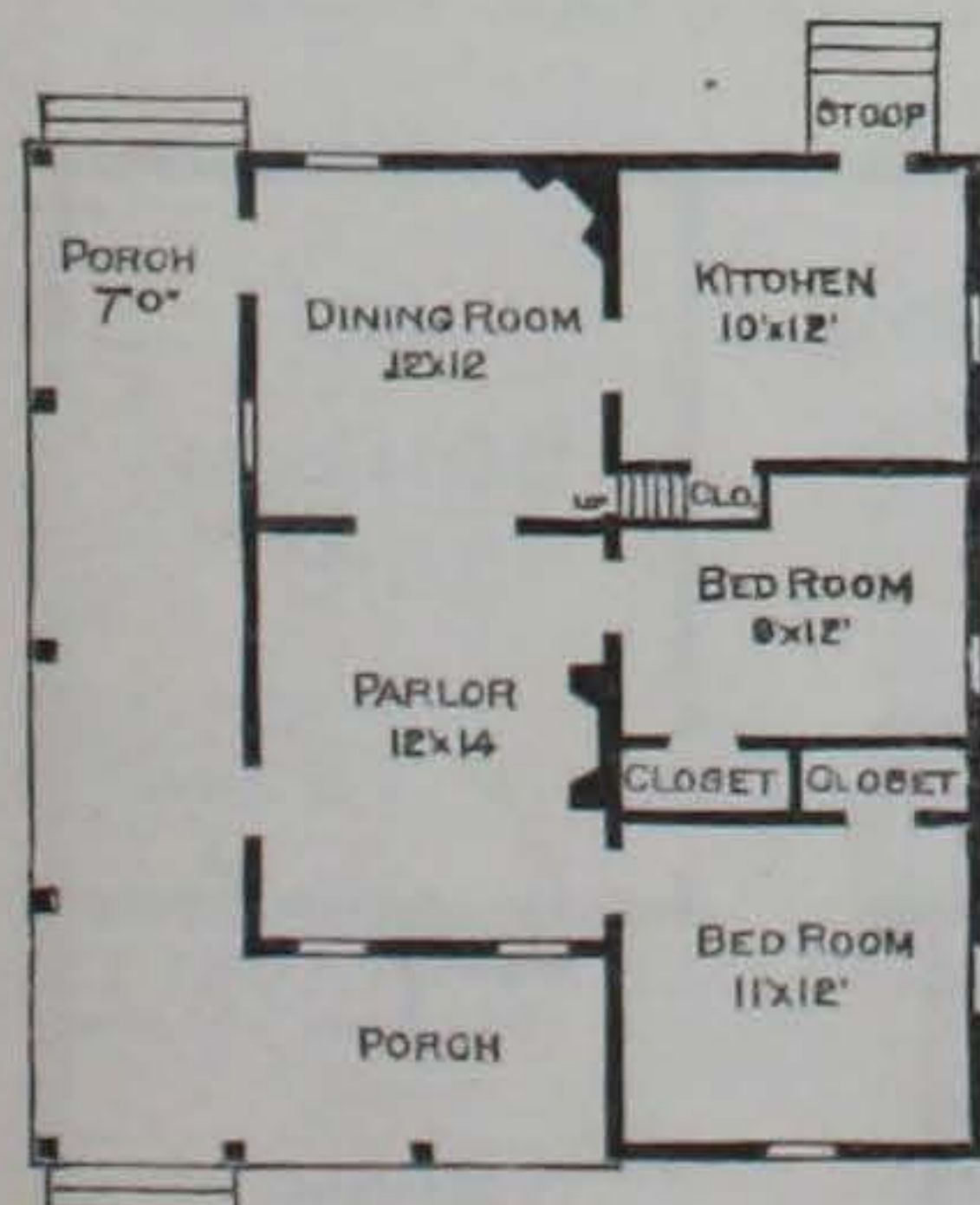
COST: According to Plan A, \$920; Plan B, \$864.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.



FIRST FLOOR. NO. 168. (A)

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

*The illustrations and descriptions of our designs preceding this number, viz.: designs from No. 1 to No. 167 (inclusive) are all found in our large book, "How to Build, Furnish and Decorate."

SPECIAL FEATURES.—A very good house for a warm climate or for a summer cottage, either inland or at the seashore. Well lined under the clapboards it is, also, a warm house for winter. Large open fireplaces. Two good rooms can be finished off in the attic, but they are not included in our estimate. A stairway to the attic is provided. In the South the cost is considerably less than our figures.

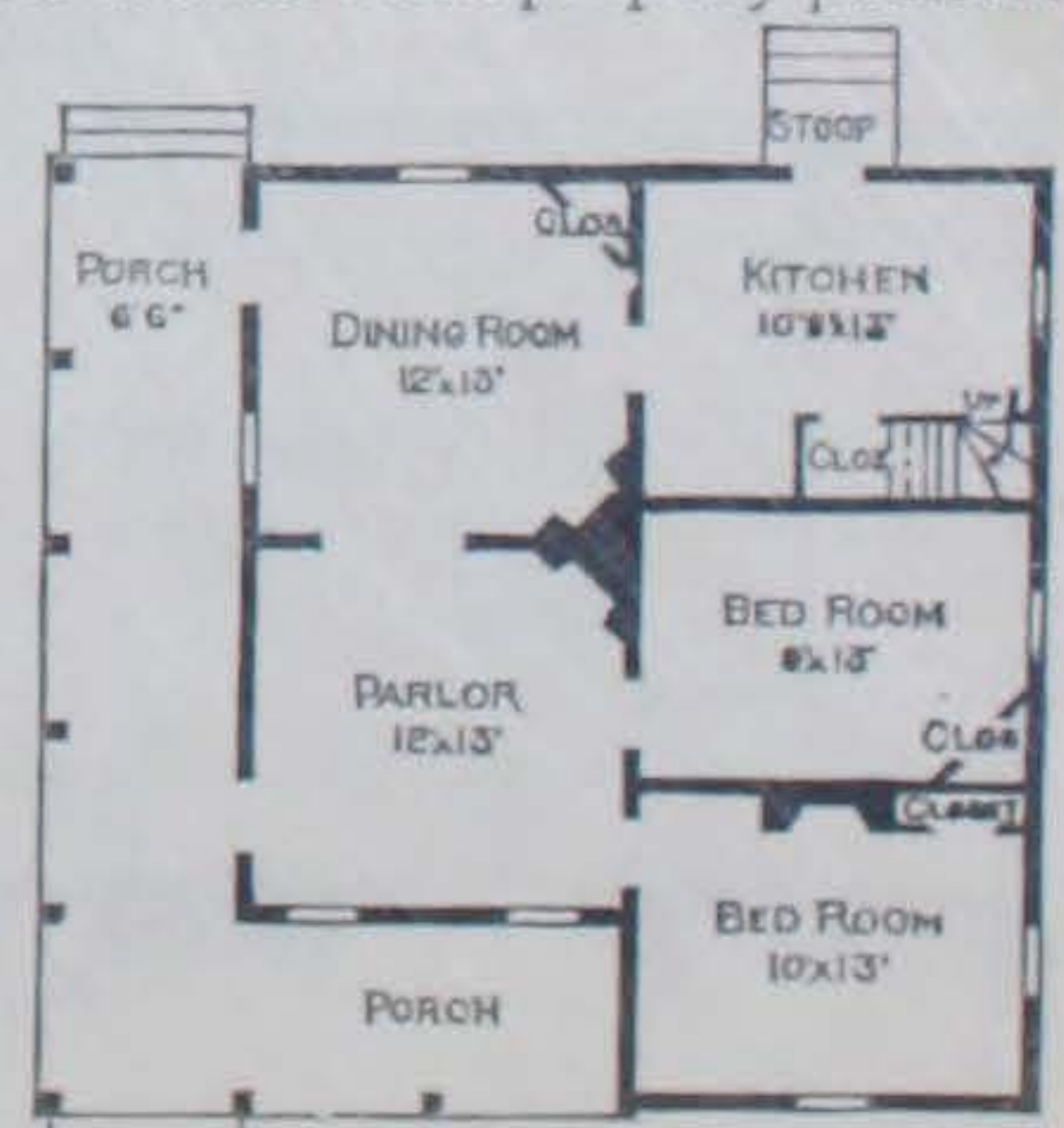
We give two plans (A and B), for this design. In ordering Working Plans, details, &c., state which is wanted. Plan A is the larger.

The exterior of this design is quite artistic when properly painted.

Where this house is built in a mild climate we advise the use of heavy paper (plaster board) in place of regular lath and plaster. It saves at least \$100 and is quite as good. One side of it has a printed design like regular wallpaper. By wainscoting with wood up to the window sills, then using the plaster board for walls and ceilings and covering the joints with neat moldings a very pretty effect is produced.

If intended for a summer residence only it is just as well not to build the two brick chimneys, but instead have a terra cotta chimney in the kitchen, the whole cost of which, including a pretty top, will not exceed \$10.

If costly labor like mason work and plastering can be kept out of a job the whole cost is greatly reduced. By setting this house on posts, using plaster boards and a terra cotta chimney, cheap carpenters can do the whole of it, even the painting, as our working plans, specifications and details make everything plain to the most inexpert.



FIRST FLOOR. NO. 168. (B)



DESIGN No. 169. FRONT ELEVATION

DESCRIPTION OF DESIGN NUMBER 169

SIZE OF STRUCTURE: Front, 20 ft., 8 in. Side, 24 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 8 ft., 8 in.; Second Story, 8 ft.

MATERIALS: Foundation, wood posts set in concrete or brick piers; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$800, all complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

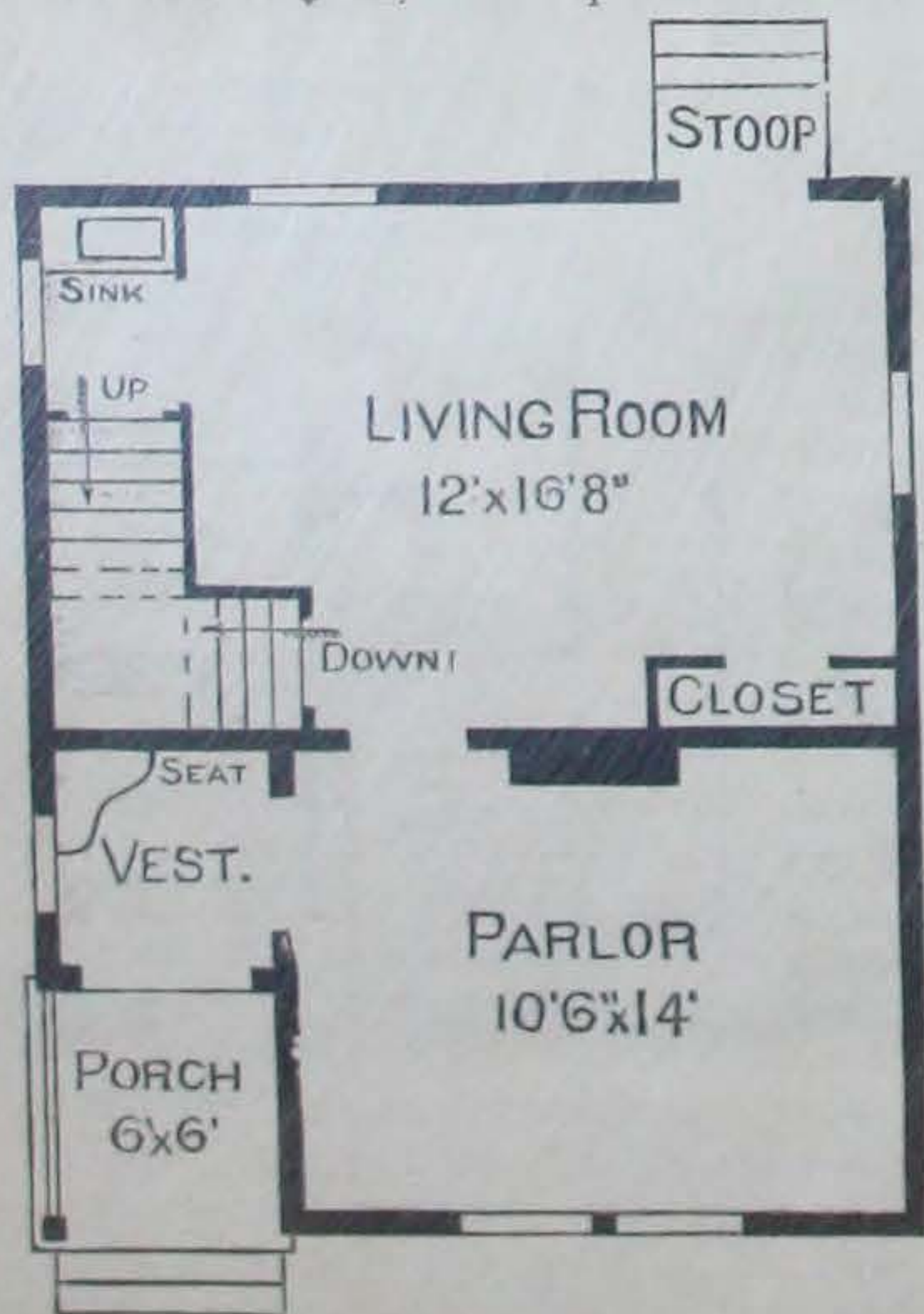
NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

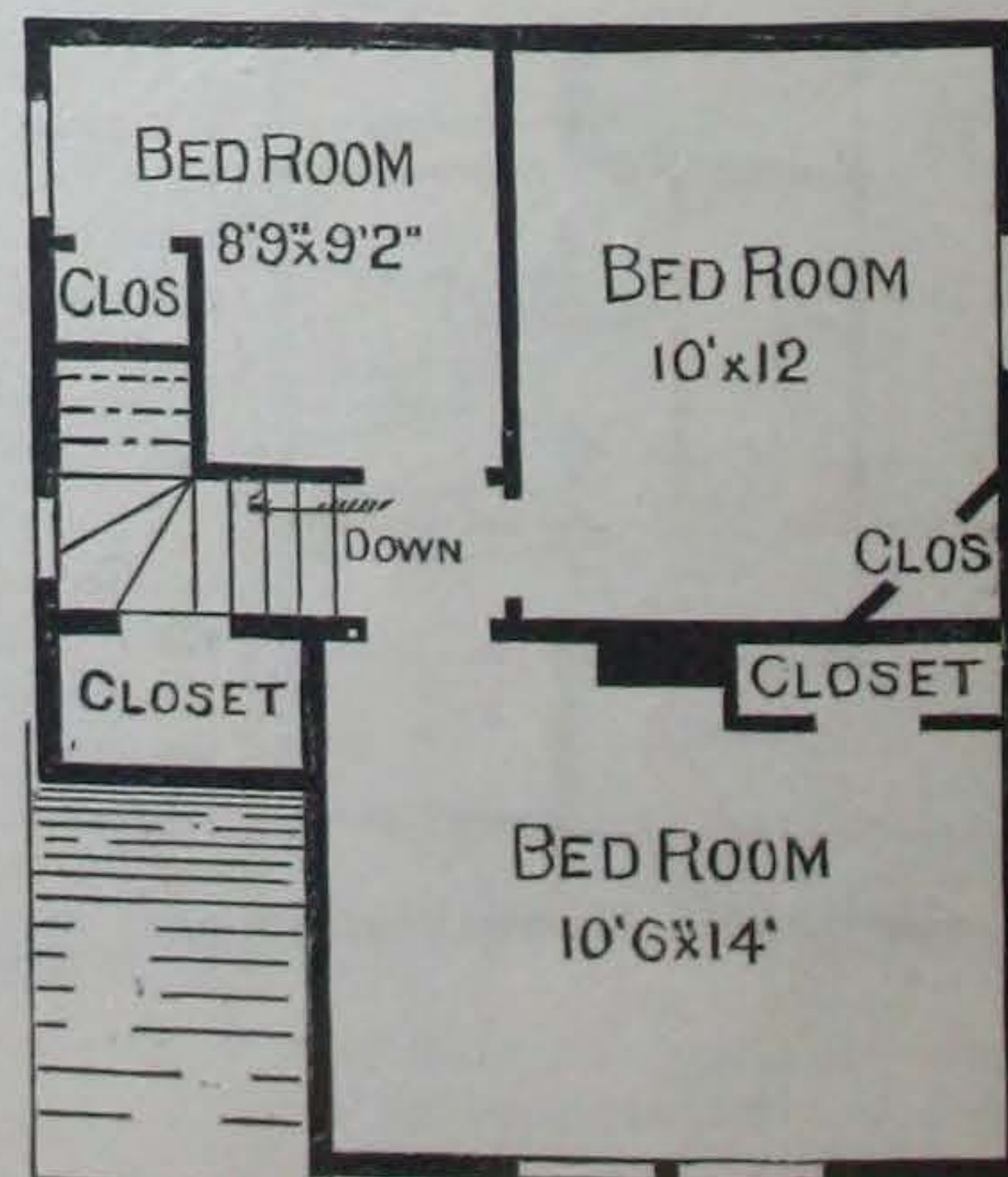
Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

SPECIAL FEATURES.—The sink should be enclosed by a curtain or a screen. A cellar is under half of the house. A one-story kitchen can be added at an additional expense of \$75.

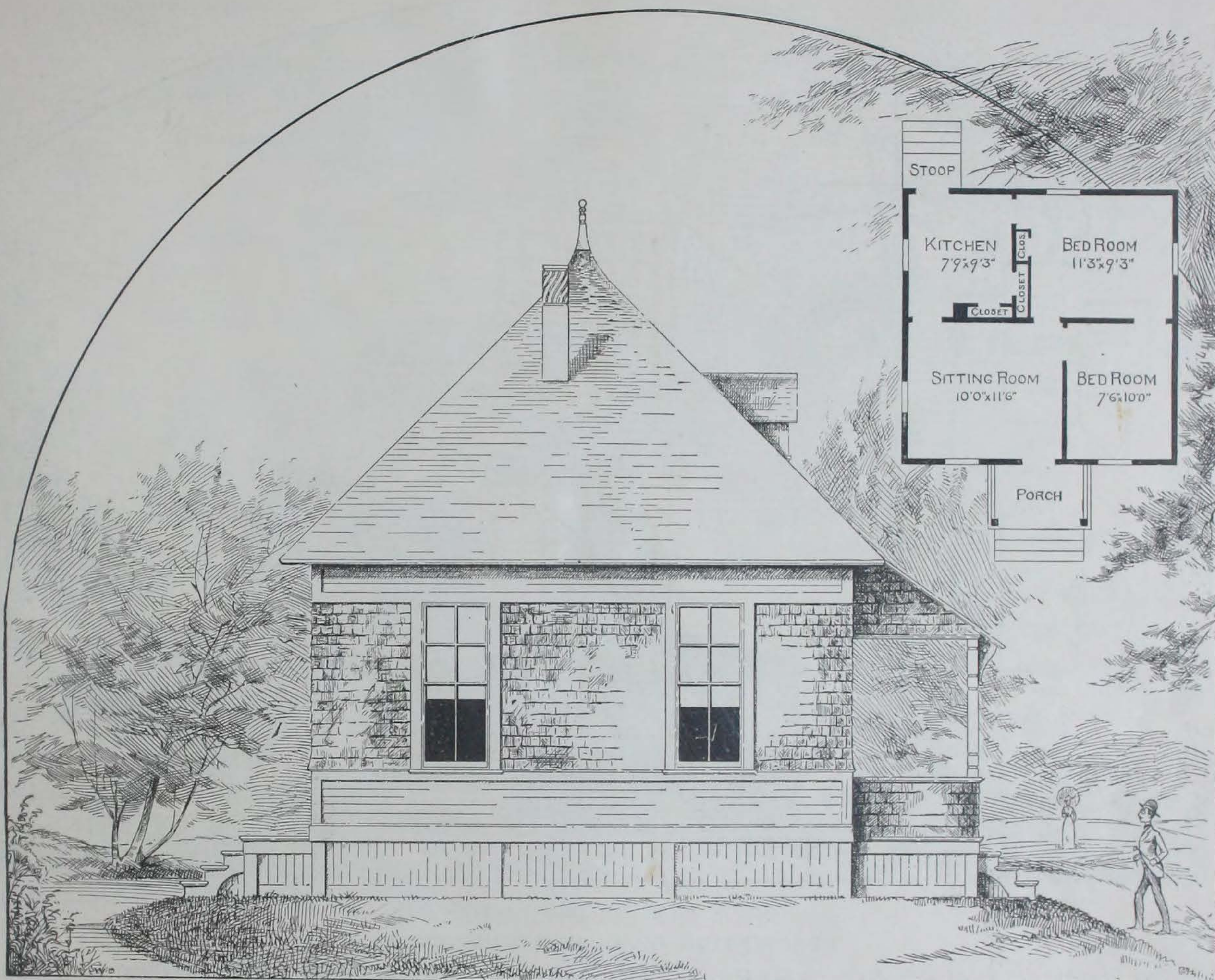
This is a capital house for a young couple just starting in life. It is prettier than many of the larger and more pretentious structures that may be its neighbors. The vestibule is a nice feature and it insures the first floor against cold draughts. If a good fire is kept up in the living room when the parlor door is closed the heat will find its way up the stairway and thus warm the rooms of the second story. This is quite sufficient except in the most rigorous climate. In two of the bedrooms stoves can be used. If the builder of this house is a "handy man with tools," he can do some of the work himself, such as painting. The principal expense in painting is the labor. Our sheet of details about painting shows just how to do it, specifying colors, with directions for mixing and how to lay it on, even describing the kind of brushes to use. Cellar under living room.



FIRST FLOOR. NO. 169



SECOND FLOOR. NO. 169



DESIGN No. 170. SIDE ELEVATION

DESCRIPTION OF DESIGN NUMBER 170

SIZE OF STRUCTURE: Front, 20 ft. Side, 20 ft.
 SIZE OF ROOMS: See floor plans.
 HEIGHT OF STORIES: First Story, 10 ft., 6 in.

MATERIALS: Foundation, wood posts; First Story, shingles, with bands of clapboards; Roof, shingles.

COST: \$410, complete.

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some localities much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—There is no plaster used in this house, and no mason need be employed. The terra cotta chimney can be set together or built by the carpenter.

The walls are covered with heavy

paper ('plaster board') secured to the frame by neat wood moldings, and left in its natural color, which is a reddish salmon, or, if preferred, the plaster board can be covered with ordinary wall paper. The molding are placed over the joints of the plaster board which give the walls a pretty panelled effect. Neat wainscoting is used up to the height of the window sills. Altogether these interiors are very pretty, while they are warm and inexpensive.

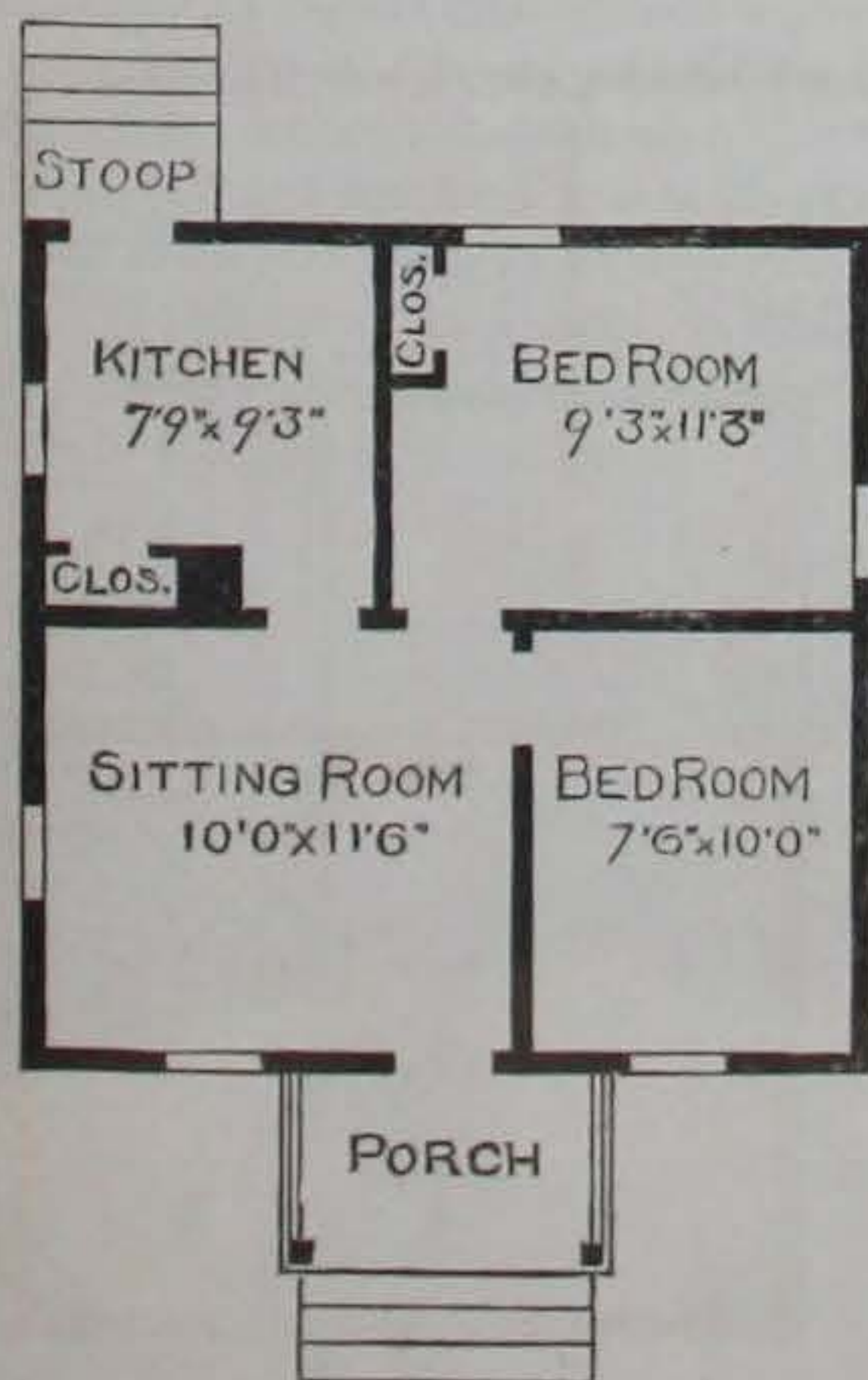
The space under the roof can be used for storage, and is reached by means of a step ladder and trap-door in the ceiling of one of the bed-rooms.

DESCRIPTION OF DESIGN NUMBER 171

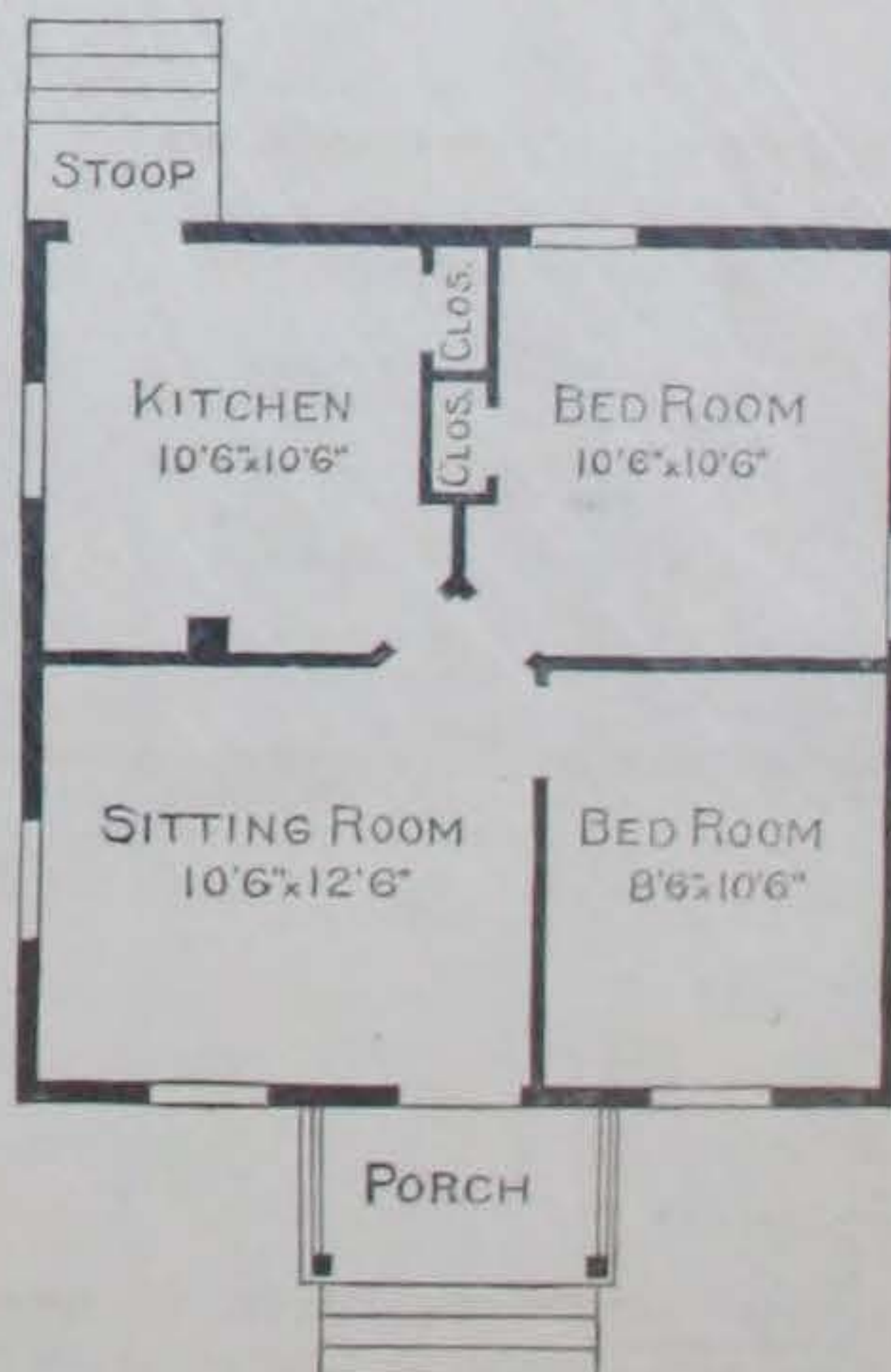
This is simply an enlarged modification of the design last described. It is 22 feet square.

COST: \$468, complete.

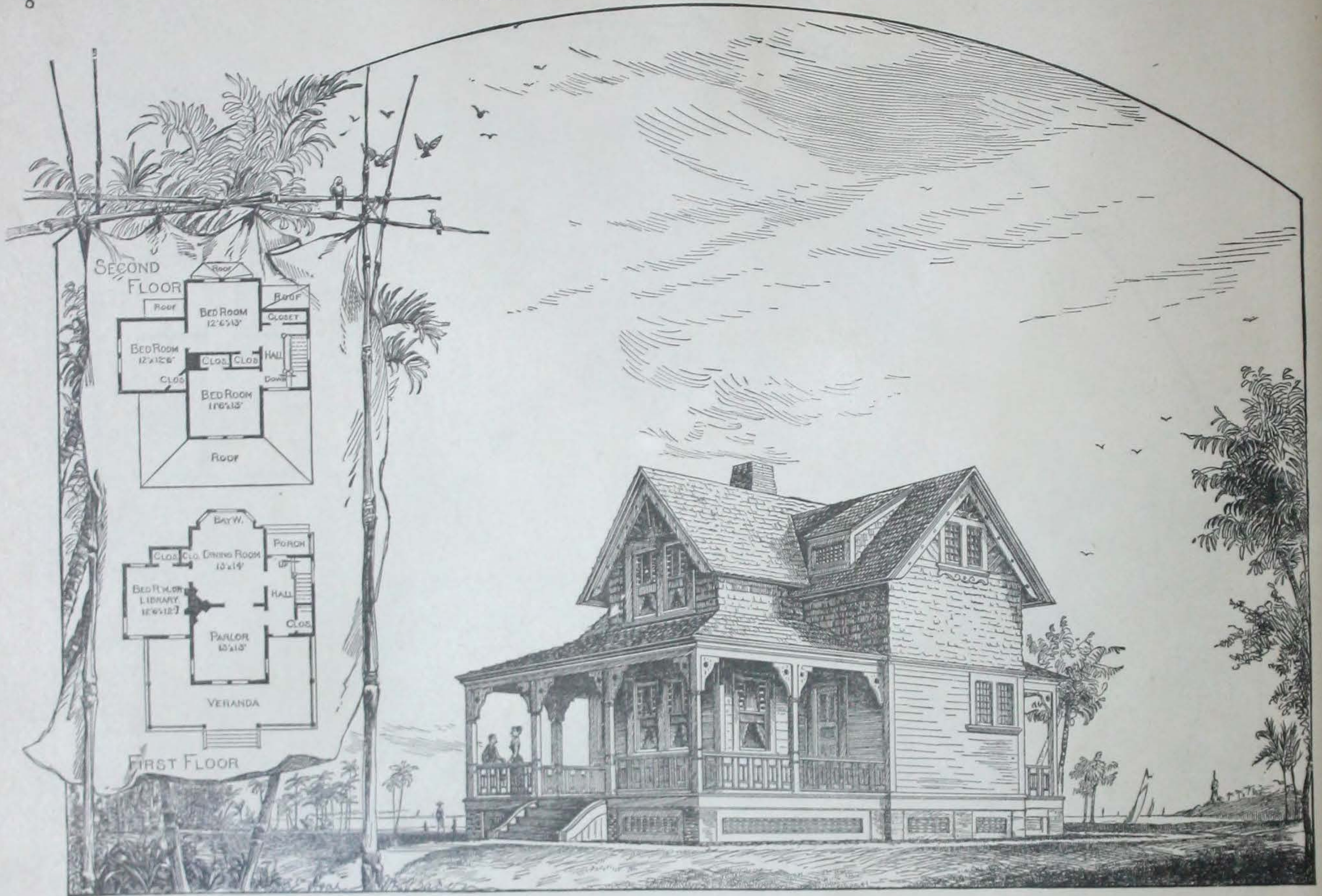
[See the first pages of this book for information about details, specifications, bill of quantities and working plans of these designs.]



ANOTHER PLAN FOR DESIGN NO. 170



PLAN FOR DESIGN NO. 171



DESIGN No. 172 PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 172

SIZE OF STRUCTURE: Front, 30 ft., including veranda. Side, 40 ft., including veranda and bay-window.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 10 ft.; Second Story, 9 ft.

MATERIALS: Foundation, wood posts set in concrete or brick piers; First Story, clapboards; Second story, shingles, Roof, shingles.

COST: \$1,500, complete, except heater.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of these designs]

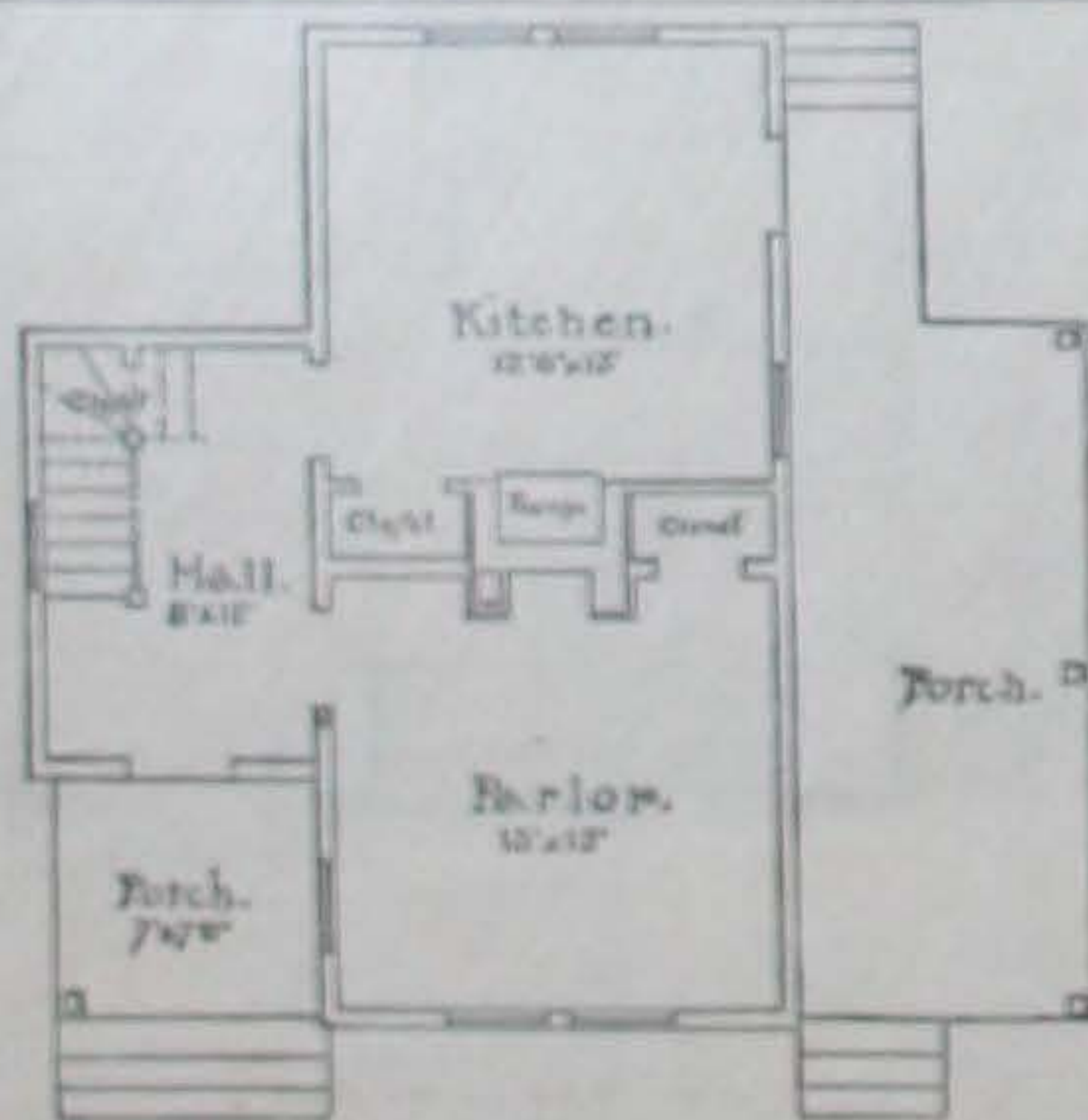
SPECIAL FEATURES.—With its broad veranda and open fireplaces this design is specially suitable for a Southern, Seaside or Summer Cottage. The kitchen is in a small detached building in the rear.

In fact, however, it is well adapted for any climate. A fireplace heater in the parlor or dining-room easily warms the three bed-rooms up stairs. If a detached kitchen is not wanted the library can be turned into a kitchen, or a small, inexpensive addition can be built in the rear for a kitchen.

A cellar under the dining-room with strong plank walls will cost \$35 additional; under the whole house with brick walls, \$150.

The Painter's Specifications call for the body of the first story to be painted light brown; shingles on sides treated with crude petroleum; the roof stained red; trimmings olive; but these colors can be modified or entirely changed to suit the taste of the owner.

In Southern and Western States where materials and labor are cheap this house can be built for a much lower figure.



FIRST FLOOR. NO. 173

DESCRIPTION OF DESIGN NUMBER 173

SIZE OF STRUCTURE: Front, 31 ft., including veranda. Side, 29 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 9 ft.

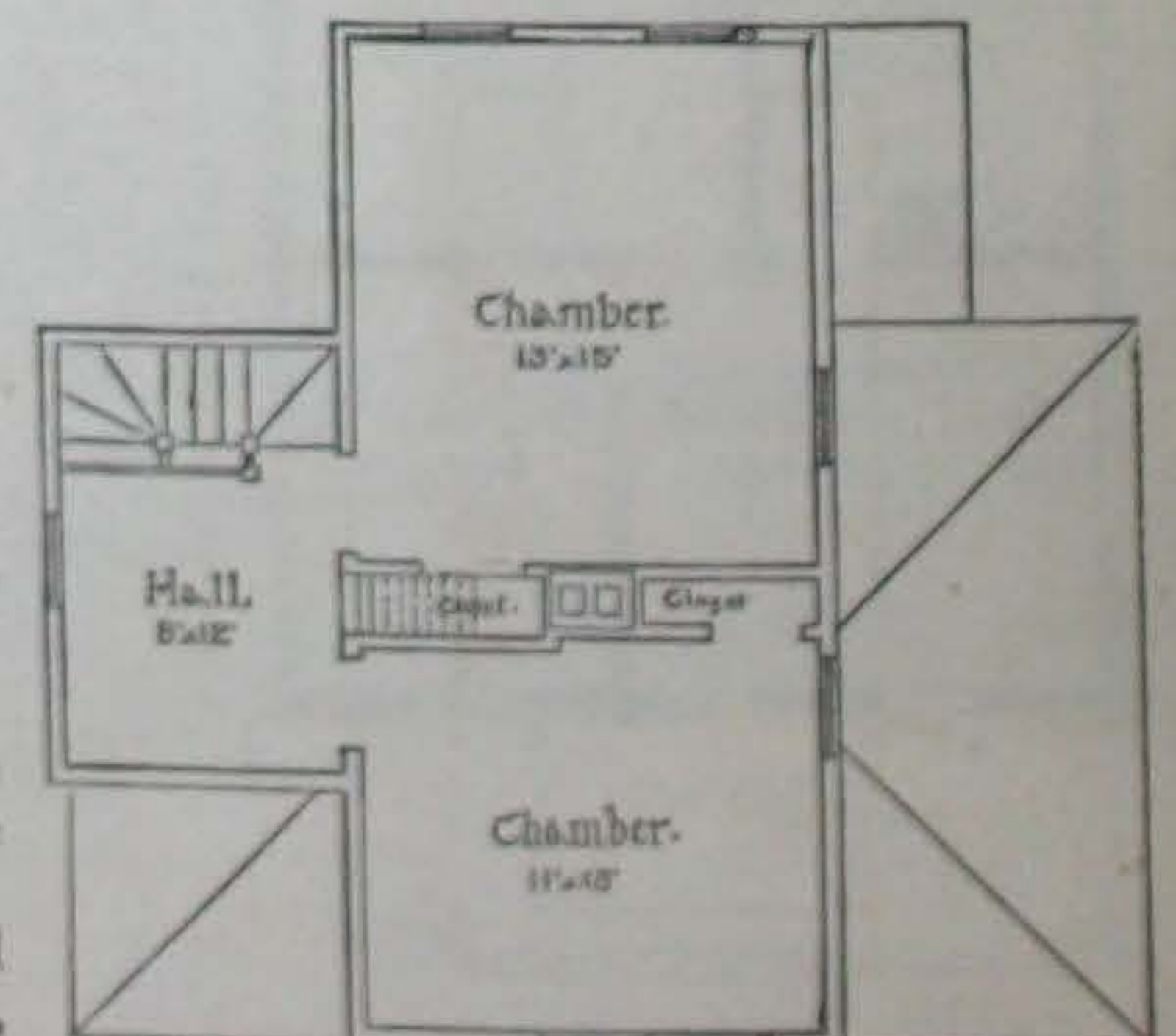
MATERIALS: Foundation, stone; First Story, clapboards; Second Story, clapboards; Roof, shingles.

COST: \$1,350, complete, except range.

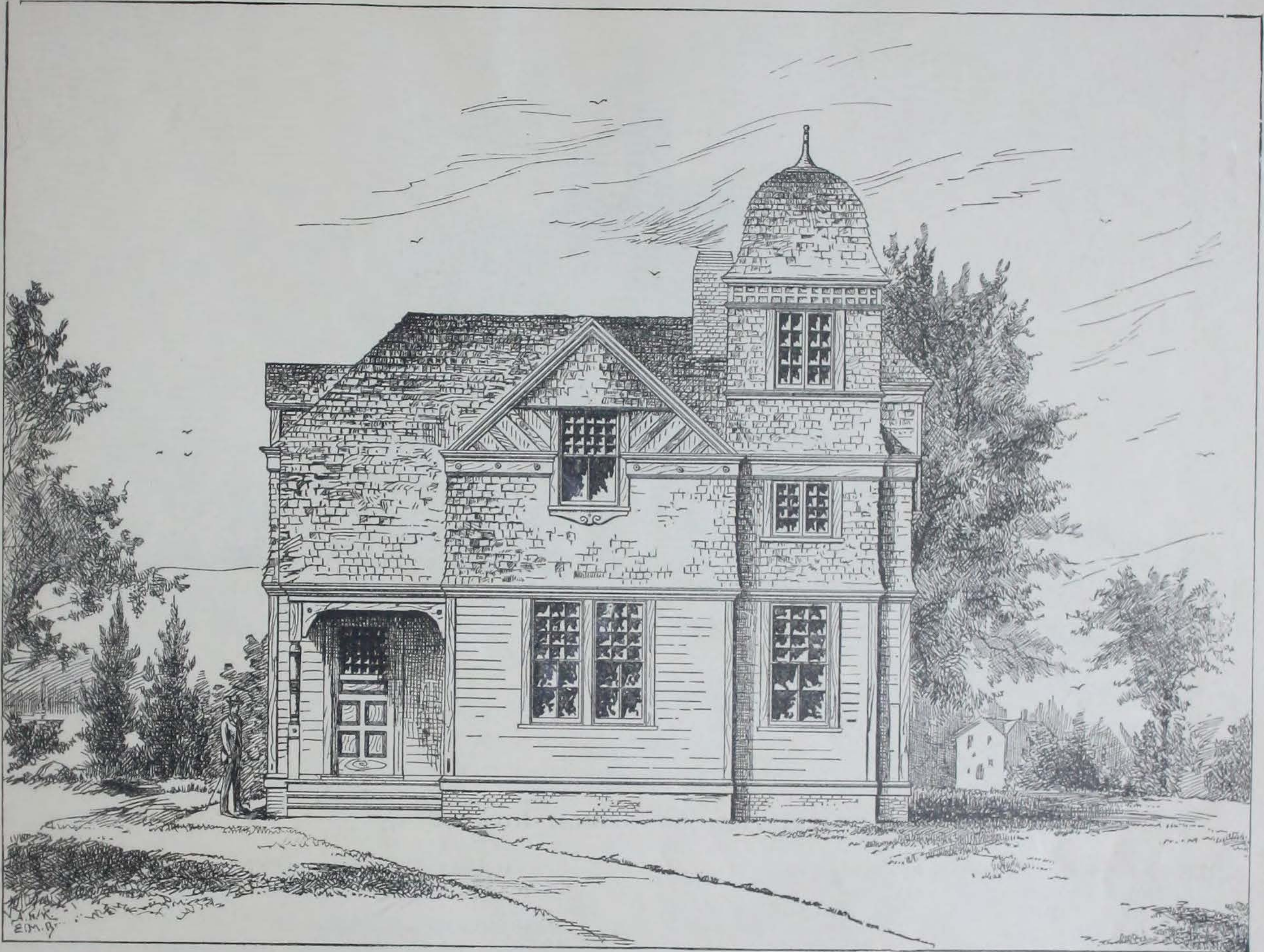
SPECIAL FEATURES.—In this house the second story is a full story. There is a cellar under parlor and kitchen.

The elevations of this design are very much in the same style as the above design, and are not given here for want of space.

By setting this house on posts or brick piers and having no cellar, or only a small cellar with plank walls, the cost is reduced \$175 to \$200.



SECOND FLOOR. NO. 173



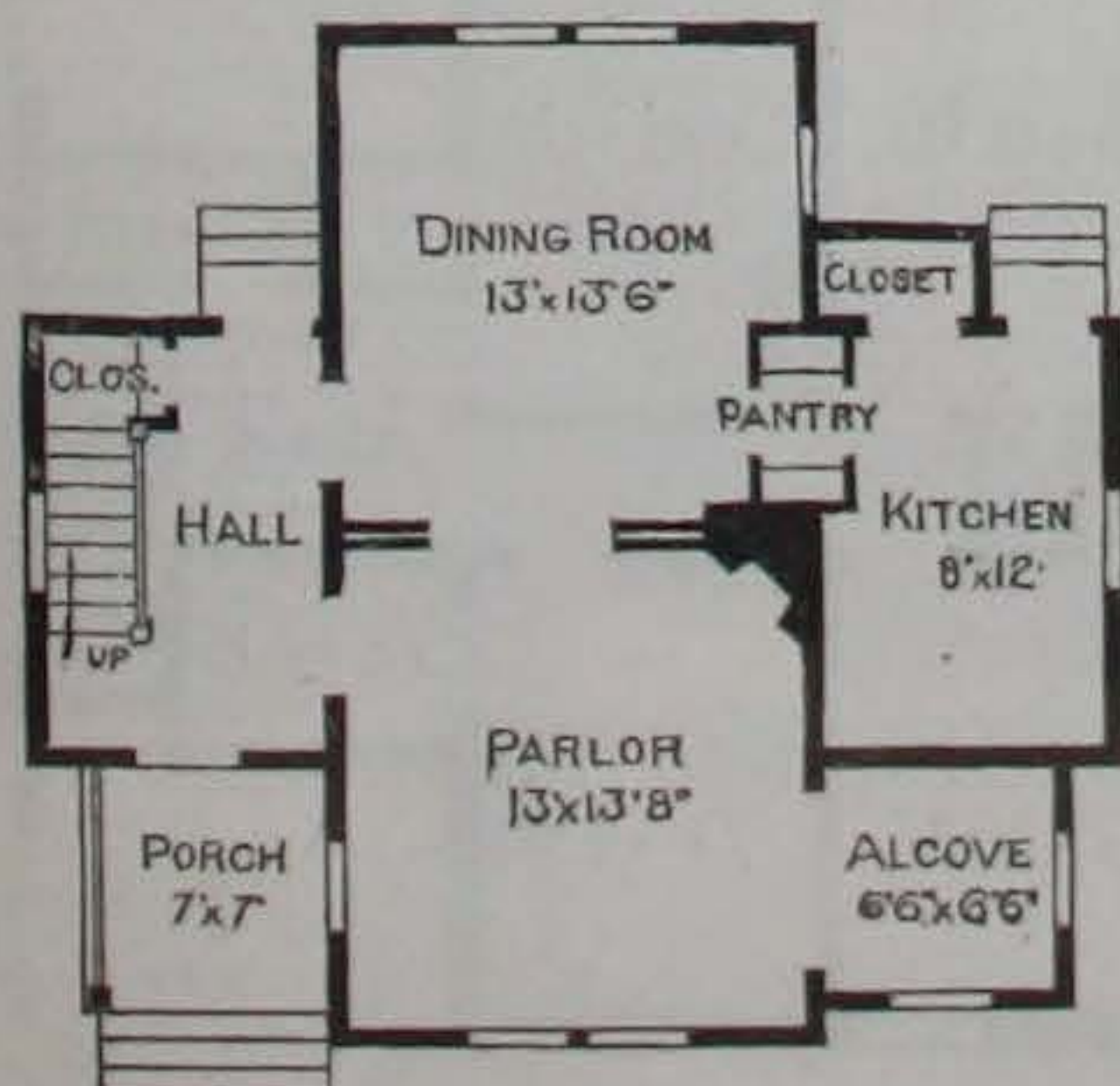
DESIGN No. 174. FRONT ELEVATION

DESCRIPTION OF DESIGN NUMBER 174

SIZE OF STRUCTURE: Front, 31 ft. Side, 29 ft.
SIZE OF ROOMS: See floor plans.
HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft., 4 in.; Second Story, 8 ft., 6 in.
MATERIALS: Foundation, brick and stone; First Story, clapboards; Second Story, shingles; Gables, shingles and half timbers; Roof, shingles.
COST: \$1,400, complete.
[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—A cellar under the rear part, with an outside entrance. By leaving out the closet under the staircase we can provide an inside stairway to the cellar. There is a small staircase for access to the upper part of the tower. Good storage room in the attic.

This is a good example of the variety of elevations that may be designed for the same plans. It will be noticed that these floor plans are almost identical with one set of those on the preceding page. The dissimilarity of the exteriors is very striking.



FIRST FLOOR. NO. 174

NOTES
 The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.
 Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

A tower is much in favor with many people of good taste. Here is one that is inexpensive, not over-pretentious, and that harmonizes with the rest of the design. The tower can be omitted, if preferred, and the roof brought down over the alcove the same as over the porch. This would save about \$125 in construction. With or without the tower this is a very pretty and somewhat novel design.



SECOND FLOOR. NO. 174



DESIGN No. 175. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 175

SIZE OF STRUCTURE: Front, 25 ft. Side, 25 ft.
 SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 8 ft., 6 in.;
 Second Story, 8 ft.

MATERIALS: Foundation, stone; First Story, clapboards;
 Second Story, shingles; Gables, panelled and half timbered; Roof,
 shingles.

COST: \$1,160, complete.

[See the first pages of this book for information about details,
 specifications, bill of quantities and working plans of this design.]

NOTES

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 New York City, October, 1885. In most other localities the cost is less—in some
 places much less. A different date also modifies cost. The publishers will be
 glad to acquaint the intending builder with this modified cost at
 any time.

Details of the Cor-
 nices, Windows, Doors,
 Gables, Trim, Mantels,
 Staircase, Inside Fin-
 ish, Colors, &c., &c.
 (these constitute the
 principal and distin-
 guishing beauty of
 modern houses), are
 fully shown on a large
 scale, on our Working
 Drawings, and careful
 directions for their
 execution are given in
 our Specifications.

This design can be
 reversed, enlarged, re-
 duced or altered to
 suit special wants.
 The specifications can
 be altered, also, to
 employ different ma-
 terials that may be
 best or cheapest in
 any locality.

SPECIAL FEATURES.—Every room has the use of the chimney.
 Fireplaces with wood mantels can be built at small additional
 cost.

Cellar under the whole house.

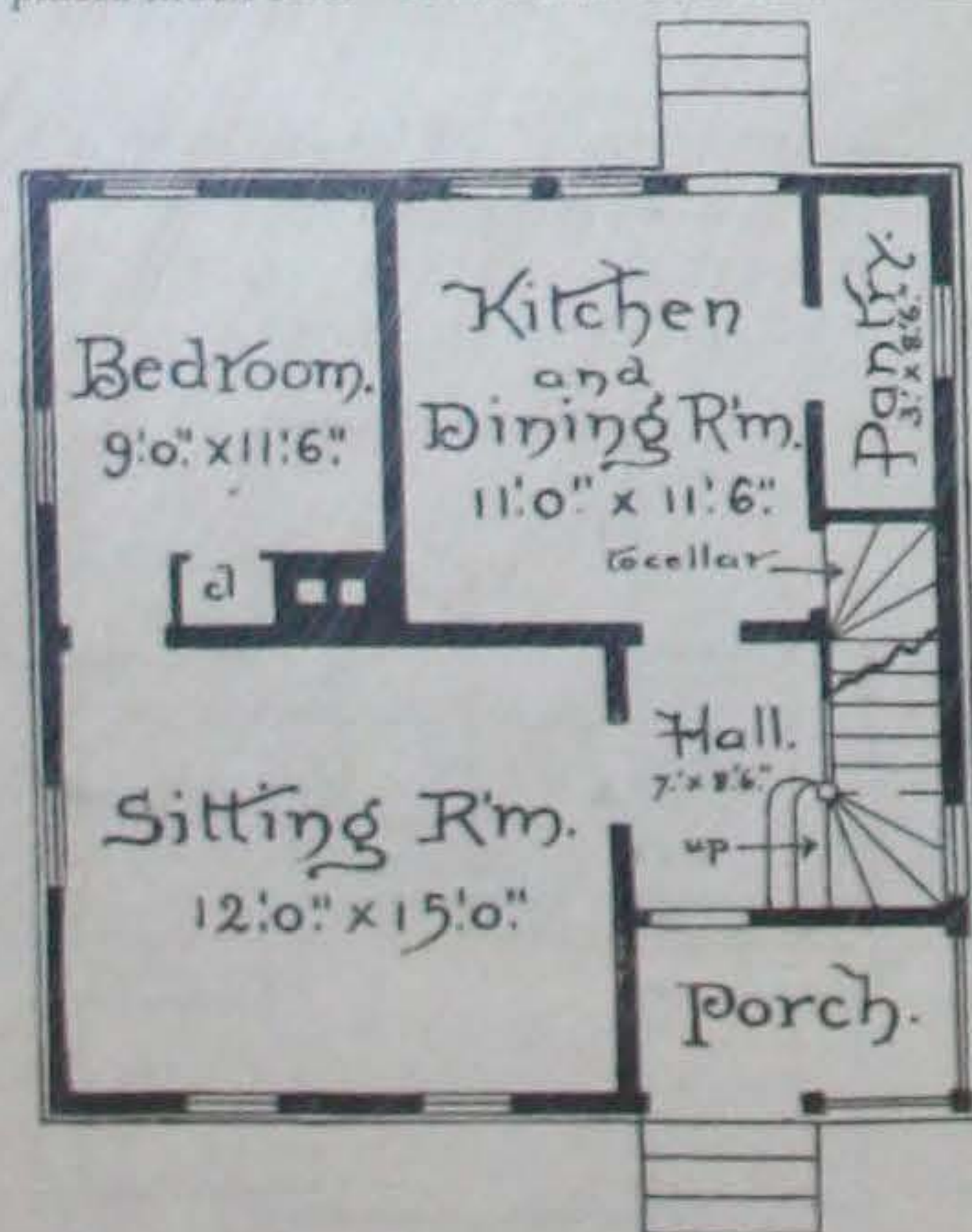
The third plan given shows how four bed-rooms can be obtained
 in the second story.

Plenty of closets and an extra roomy one in the upper hall over
 the porch.

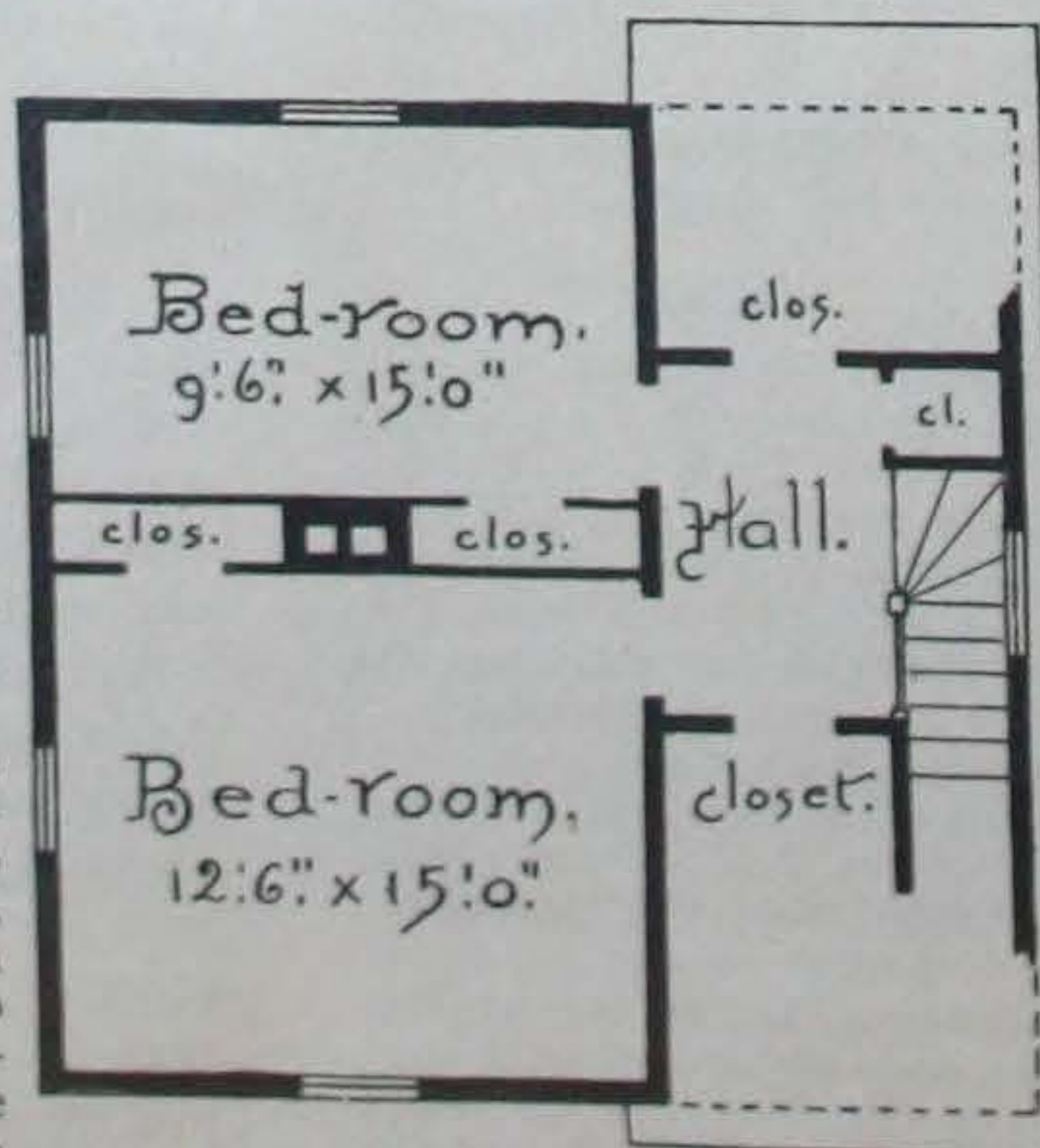
To reduce cost of this house use stone or brick piers or posts
 for foundations; use wainscoting and plaster board in place of lath
 and plaster, or two thicknesses of one-inch matched stuff (papered)
 for partitions; use clapboards in place of shingles on the second
 story walls and in the gables, but this makes the house very
 plain.

All the moldings, stair rails, doors, outside blinds (if any), are
 factory made—"sizes and designs found in stock."

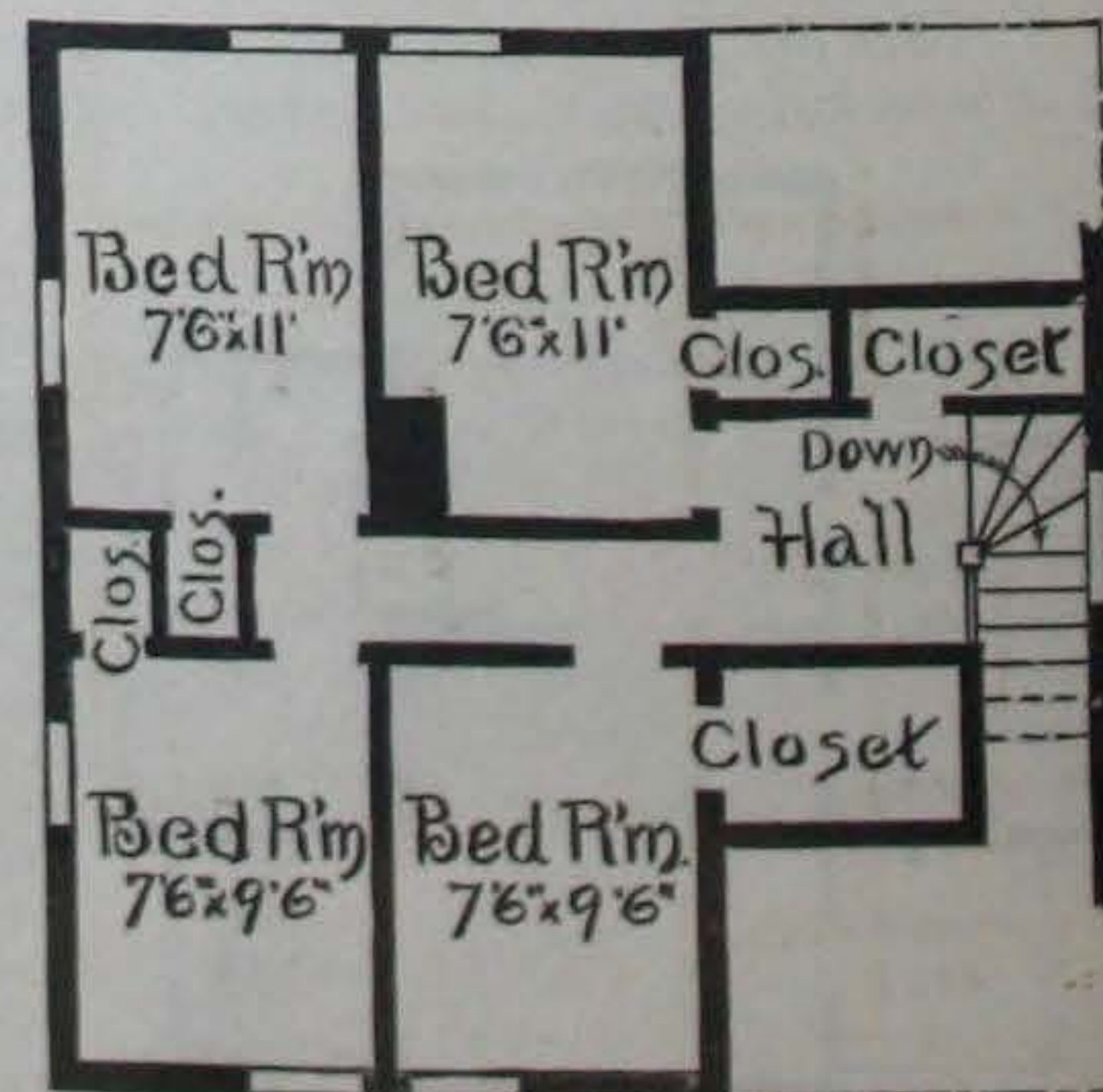
Properly painted this is a very unique and pretty dwelling.



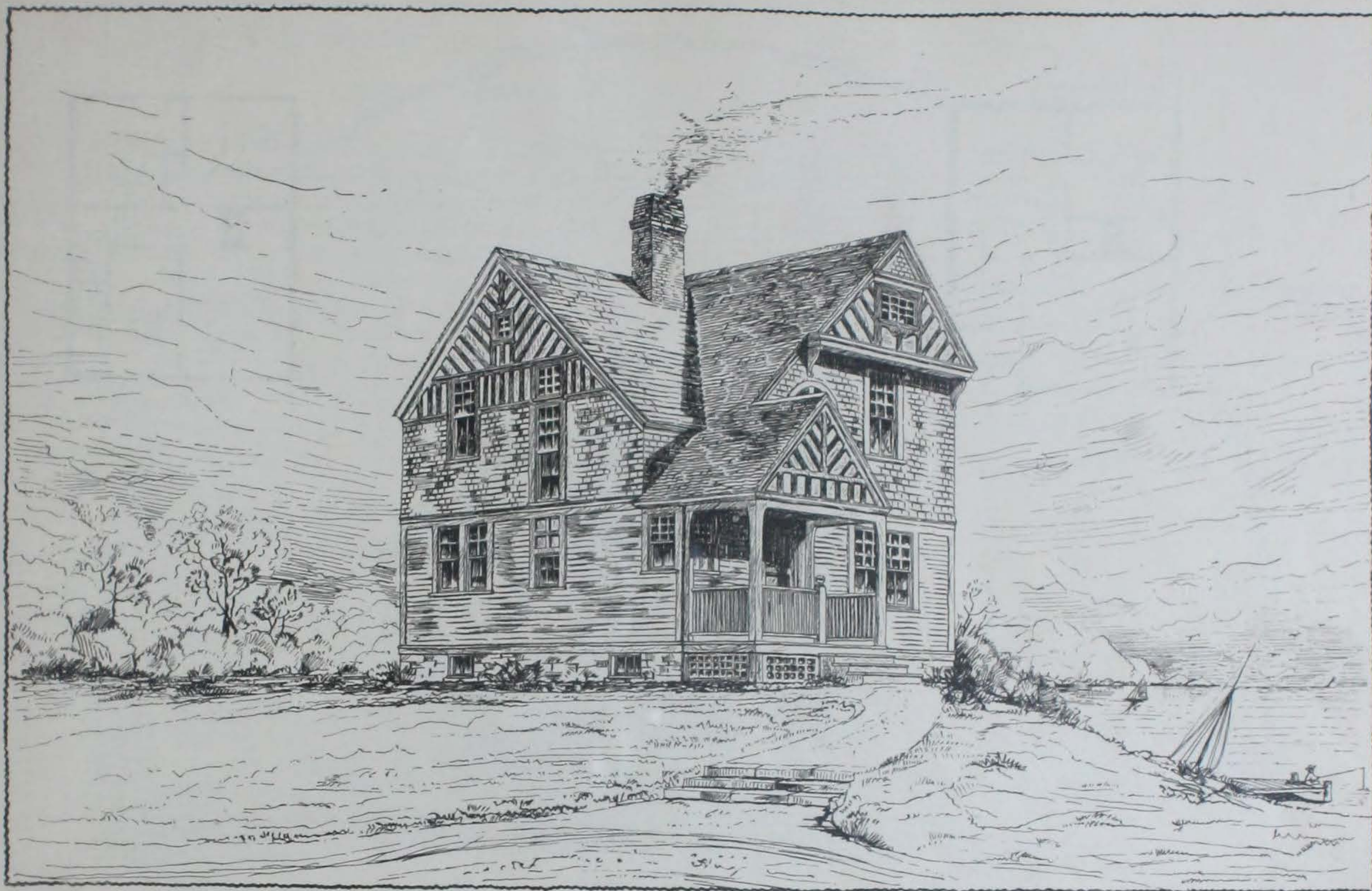
FIRST STORY. NO. 175



SECOND STORY. NO. 175



ANOTHER PLAN FOR SECOND STORY. NO. 175



DESIGN No. 176. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 176

SIZE OF STRUCTURE: Front, 25 ft. Side, 27 ft., 6 in.

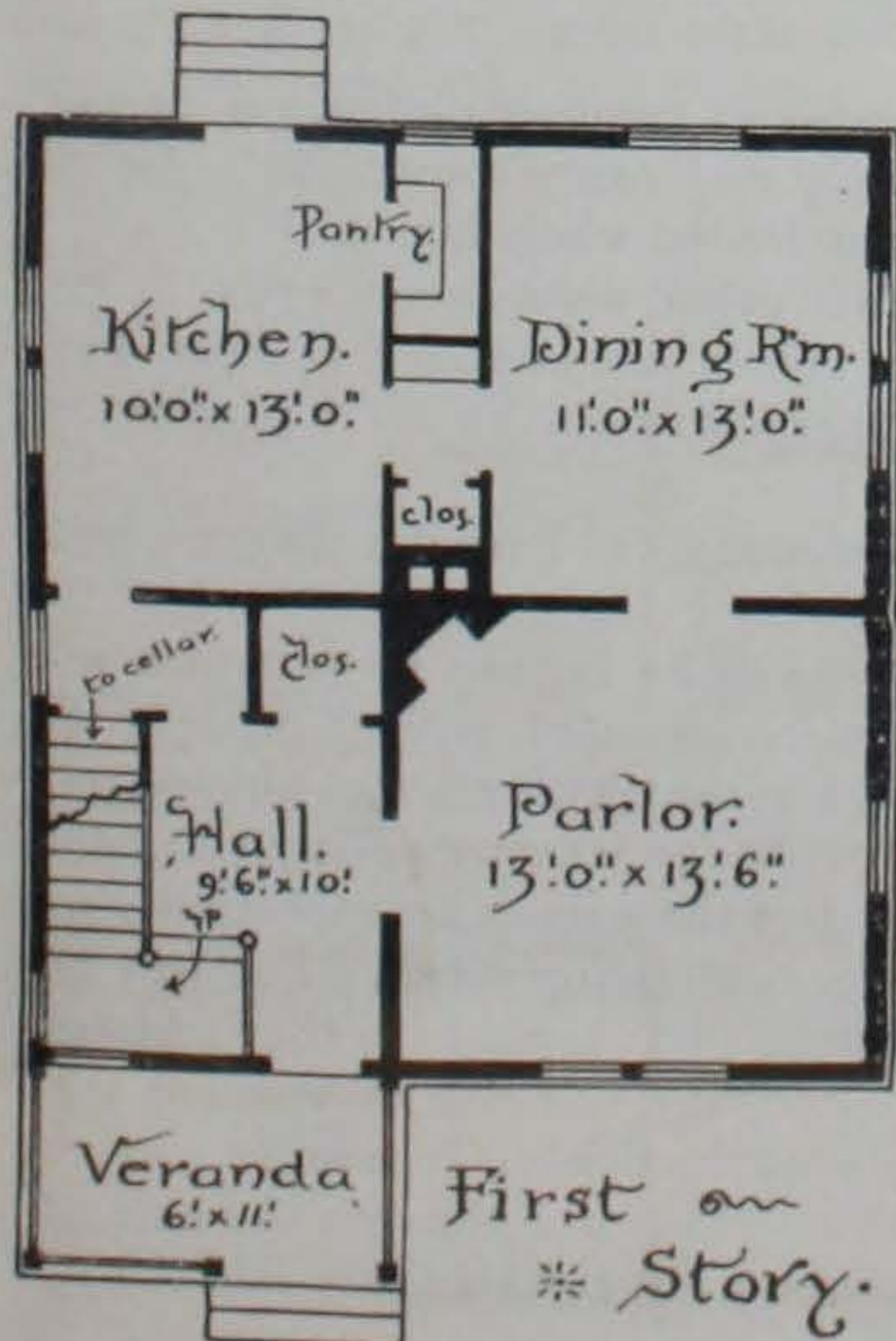
SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft.; Second Story, 8 ft.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Gables, timbered; Roof, shingles.

COST: \$1,490, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]



FIRST STORY, NO. 176

SPECIAL FEATURES.—

There is space for a hat stand or table in the hall against the stairs, and a good hall closet where coats, umbrellas, over-shoes, &c., can be put away—an inestimable aid to orderly housekeeping.

A cellar under the whole house.

The front door can be reached from the kitchen, by a side passage, without going through any room.

The veranda can be carried clear across the front, if desired.

Wide openings, with curtains, would be an economical, sensible and artistic way of connecting the hall, parlor and dining-room.

The fireplace in the parlor has a pretty wood mantel. The staircase with its broad platform and window is a

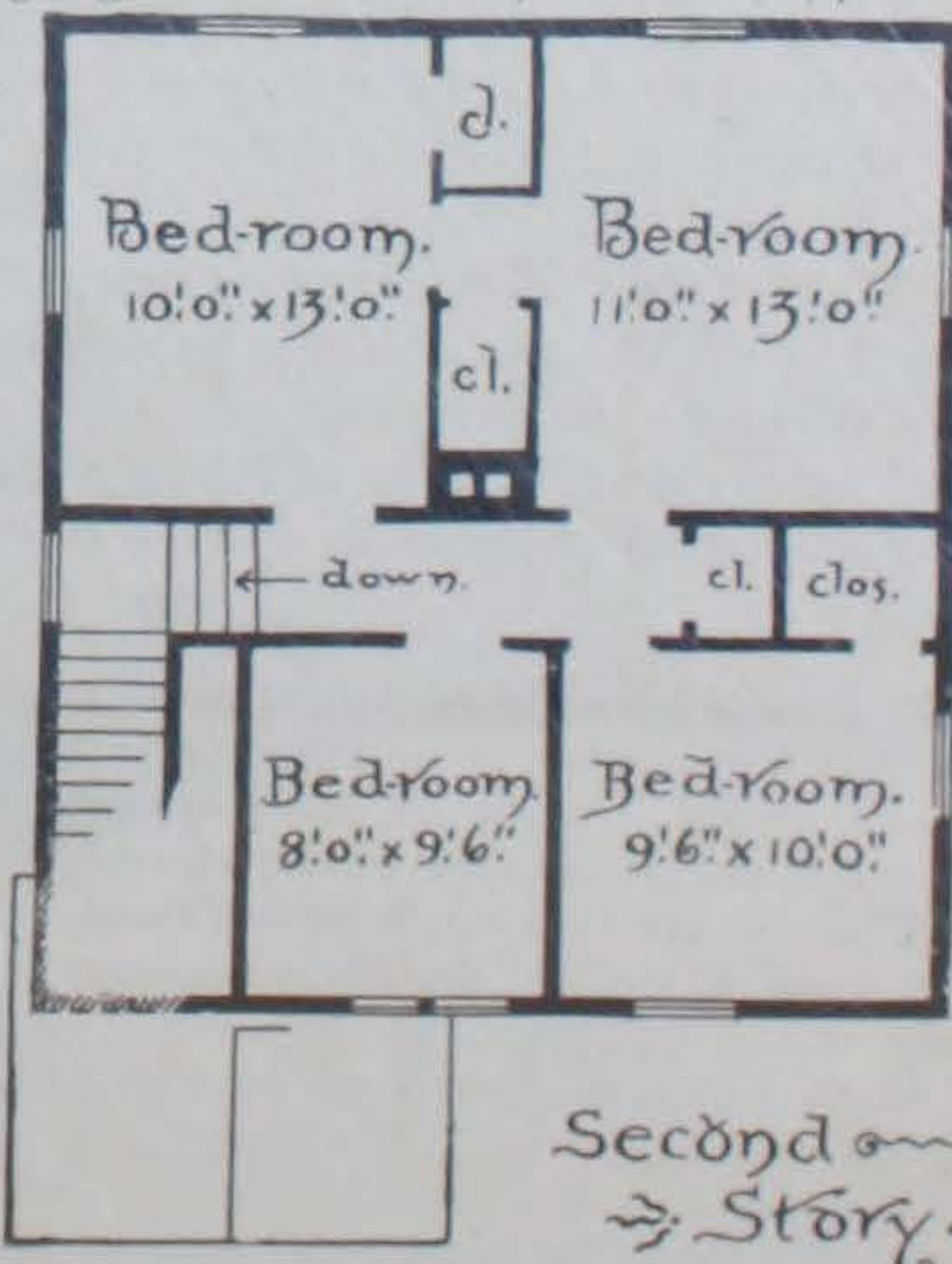
charming feature. Abundance of closets everywhere. A fireplace heater in the parlor would heat the second story.

Set on posts and no cellar reduces cost \$200.

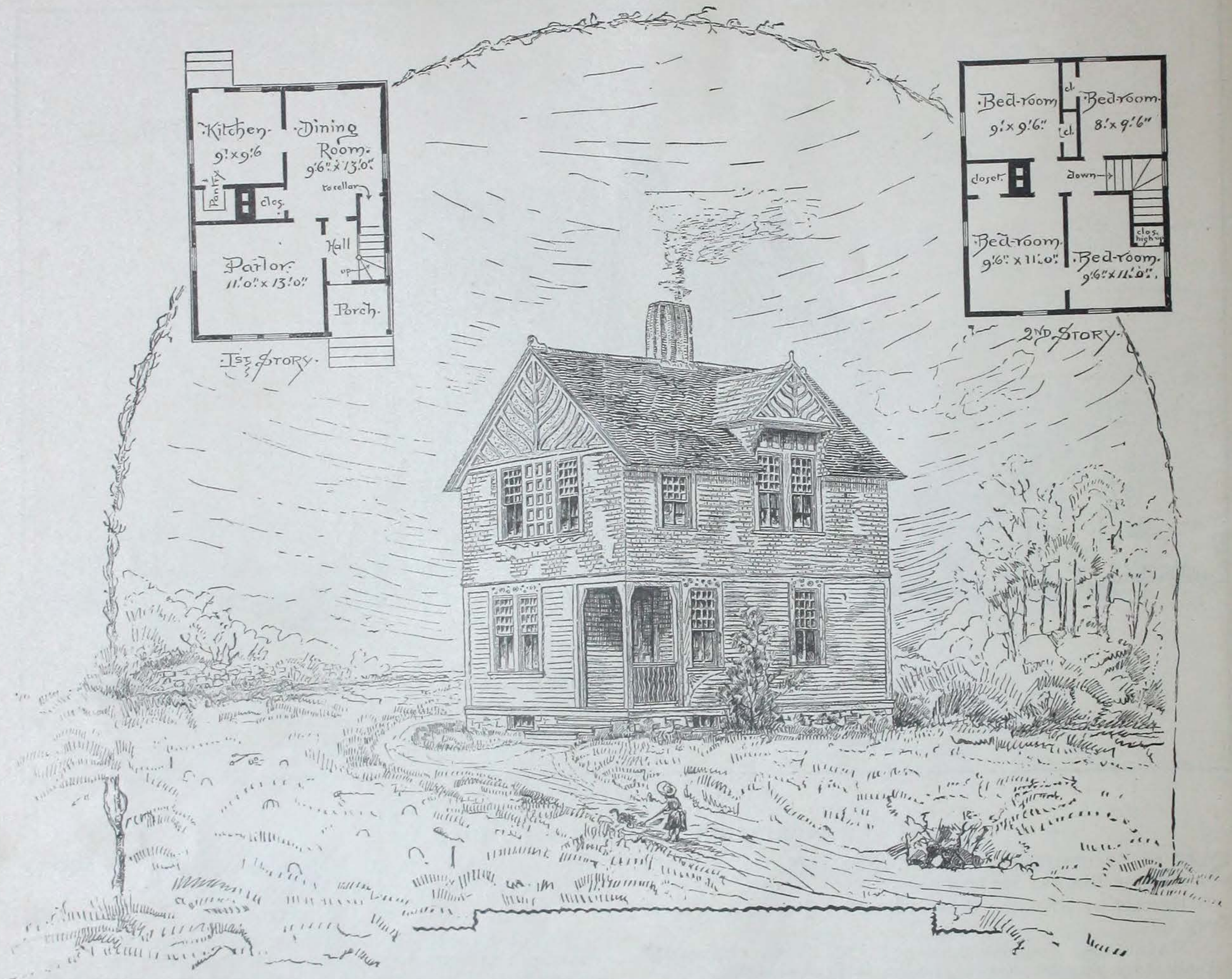
If desired, the two front bed-rooms can be made into one bedroom, with an extra large closet at the end. This arrangement reduces cost a little as there is less plastering surface, fewer studs, and the back of the closet can be boarded. It will also reduce cost if the projection in the front gable is left off and the ornament simplified. All the suggestions in the preceding design about reducing cost apply, also, to this. It is well to note, also, that spruce shingles cost only one-half as much as pine, making quite a reduction item when shingling the second story walls. Dipped in creosote stains they are quite lasting, but pine shingles are very much better.

Our working plans show a five-room arrangement of the second floor, when preferred. The extra room is obtained by omitting two closets and reducing size of the others.

We have an improved modification of this design, the changes being a lean-to addition in the rear for the kitchen, which allows all of the other rooms of the first floor to be thrown together by wide openings. The dining-room is enlarged and there is a veranda clear across the front. Also a bath-room and a storage-room over the kitchen. The increased cost is \$300.



SECOND STORY, NO. 176



DESIGN No. 177. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 177

SIZE OF STRUCTURE: Front, 20 ft. Side, 25 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 8 ft., 6 in.; Second Story, 8 ft.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles, Gables, panelled; Roof, shingles.

COST: \$1,120, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—A handsome, compact design, yet simple and regular, and therefore cheaply and easily constructed. Good closets throughout, and a cellar under the whole house.

Set on posts or piers, with small cellar, reduces cost \$150.

No fireplaces are shown, as stoves are intended to heat, but fireplaces in the parlor and chamber above can be put in at an extra expense of \$50.

In the second story three bed-rooms can have double beds, and the one next the stairs a single bed.

All sash, doors, blinds and trim can be factory made, which reduces cost. The front gable is ornamented with bands, panels between the windows, and sawed aprons with rosettes planted on, all of which cost little and improve the appearance greatly. Besides being pretty in themselves, they give the painter an opportunity to display a variety of harmonious or contrasting colors. But just at this point the owner must be wise; he should have the architect specify the colors. Otherwise he runs the risk of spoiling the appearance of a very pretty house at the finish. The same construction that affords unusual opportunities for a pleasing and harmonious display of colors, will emphasize, disagreeably, any mistake in their selection.

DESCRIPTION OF DESIGN NUMBER 178

COST: \$1,285, complete.

THIS is simply an improved modification of Number 175—being the same as that design in both exterior appearance and floor plans, with the exception that this has a kitchen addition, an inexpensive lean-to costing about \$100.

The intending builder should bear in mind that this feature can be added to almost any of our designs where they are not already shown.

It is a singular fact that there are but few modern low-cost houses for sale. The explanation is that the owners generally prefer to keep them and live in them. Whoever wants a small modern house must go to the trouble of building it, which is not a stupendous undertaking even for the novice, if working plans, specifications and details are procured and these made the basis of a contract with the builder.

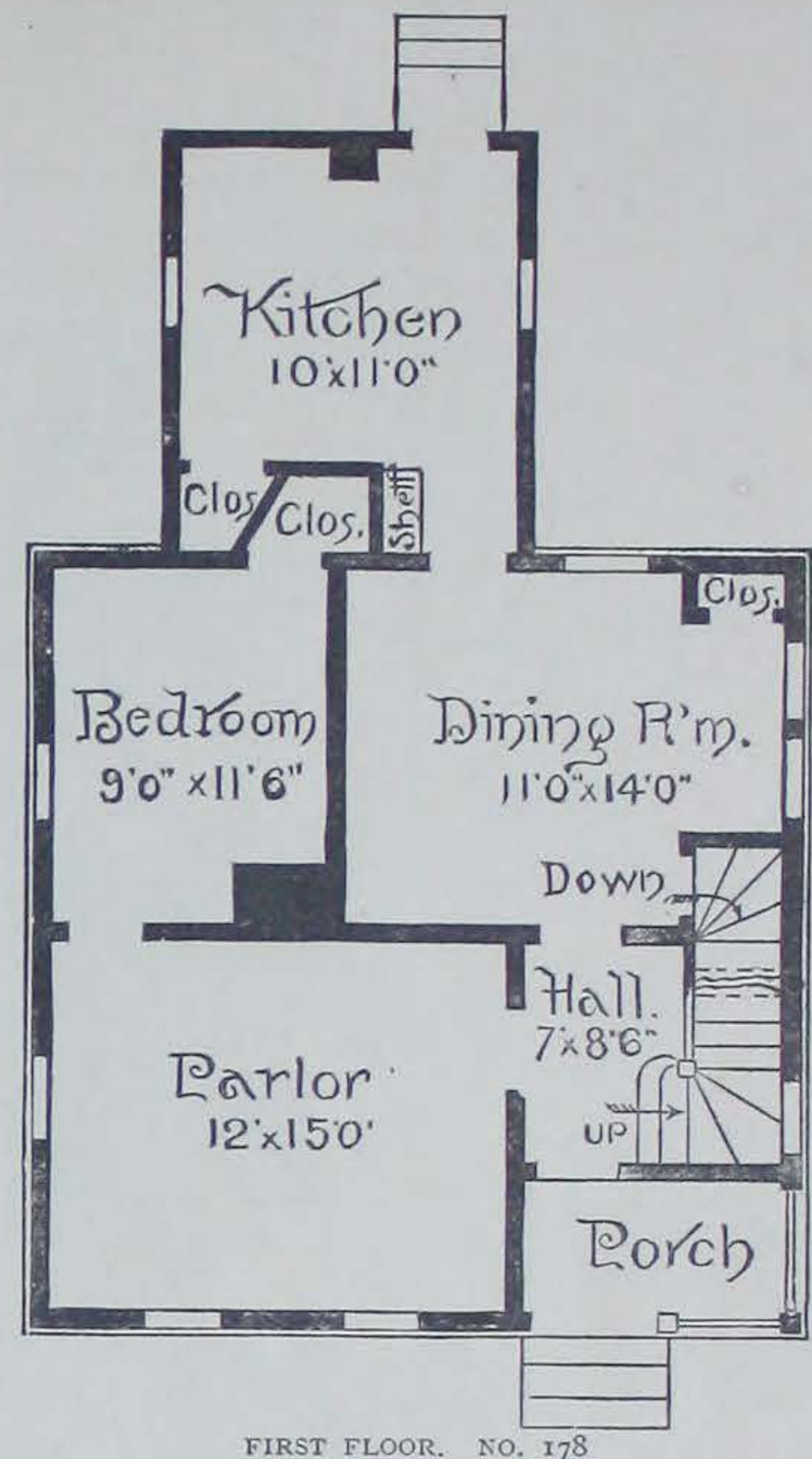
[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.



FIRST FLOOR. NO. 178

DESCRIPTION OF A DOUBLE HOUSE NUMBER 179

COST OF DOUBLE HOUSE: \$1,950, complete.

THE elevations and floor plans are the same as Number 177, doubled, and the roofs connected. Height of stories, size of rooms, &c., the same.

It will be noticed that the two families are quite as well separated as they would be if the houses were detached. There is a reduction in cost of fifteen to twenty per cent. where houses are built in this manner, and it economizes space where lots are costly or growing in value. Built upon a fifty-foot lot, there is space for a five-foot alleyway on each side. Timid folks, particularly the ladies of a city family moving into the country, like near-by neighbors; they feel more secure.

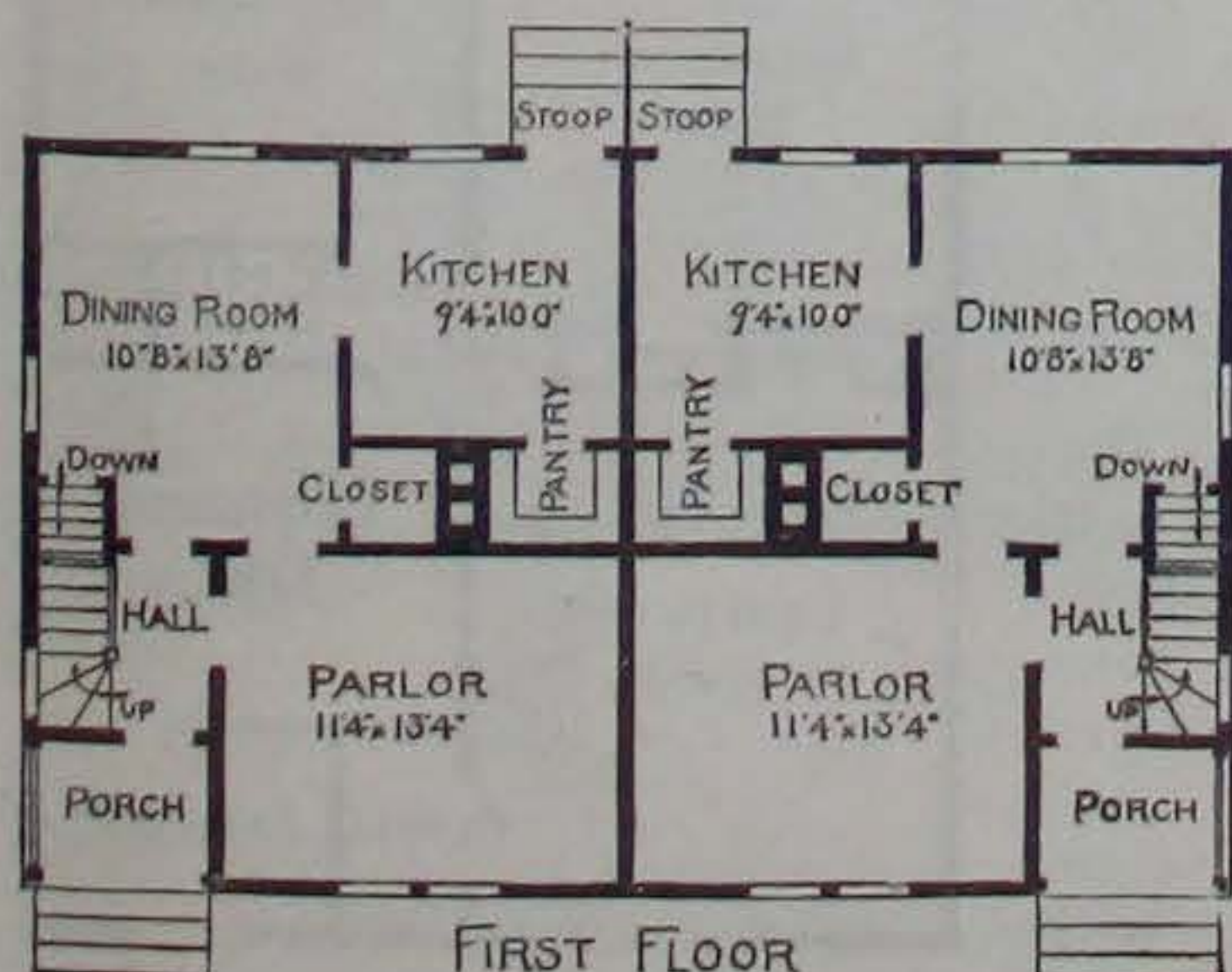
The capitalist who will build small modern houses, locating them within easy reach of a large population, will receive from ten to twelve per cent. on his investment, and at the same time see the property increase in value from year to year.

These investments are not confined to capitalists, however. Two men of small means, with say \$1,200, can easily manage to build the double house under consideration, if the lot does not cost over \$200. By paying the contractor \$1,000, as the

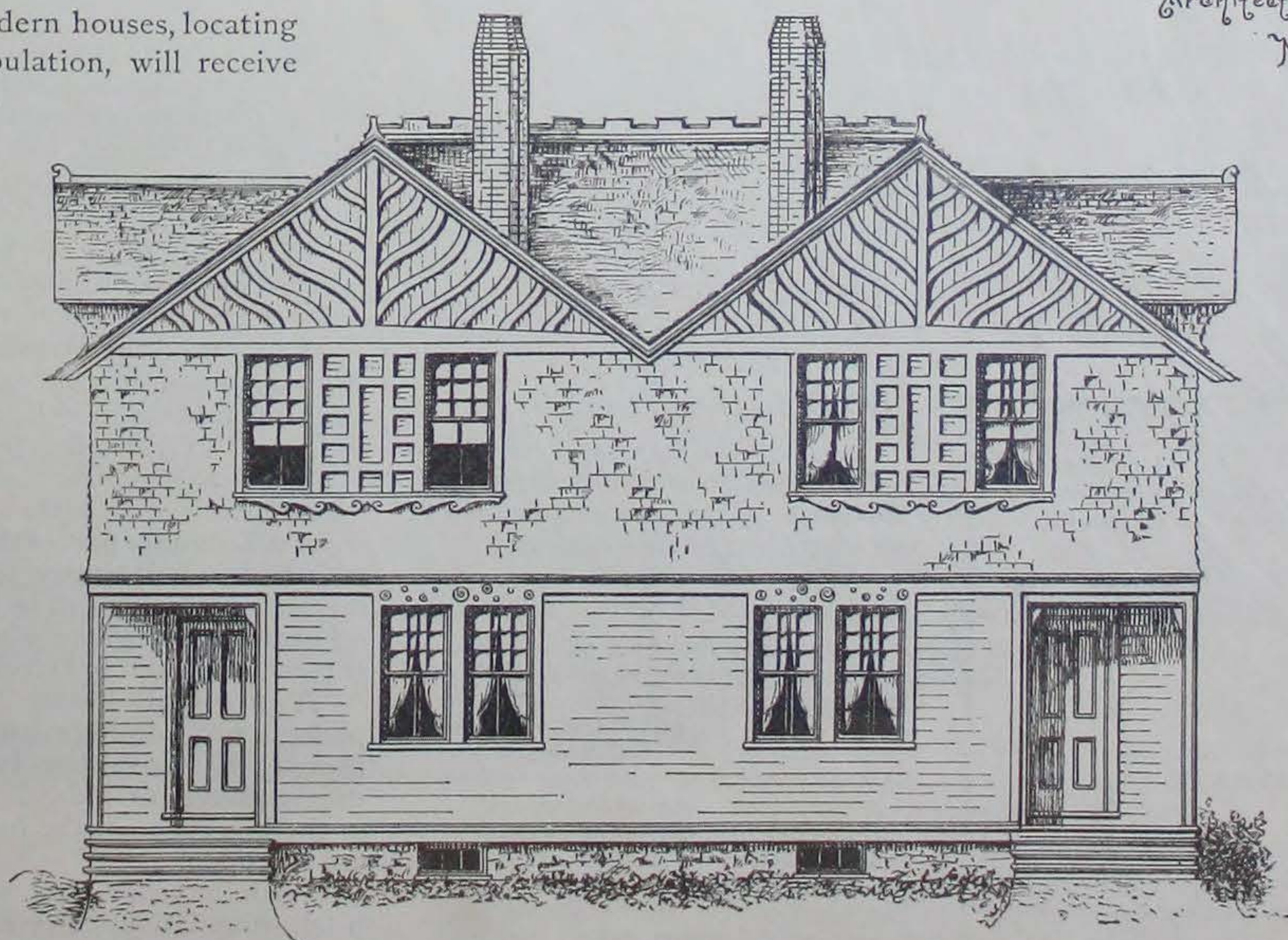
building progresses, and giving him a mortgage for \$950 at its completion (which he can easily negotiate and turn into cash if he wishes), the whole business is done. The interest on the mortgage would cost each man about \$15 every six months, which is cheaper than paying rent and makes it possible to accumulate savings that will pay off the mortgage in time. The same example shows also how one man, with a little more than half the amount above stated, can manage to build a single house.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

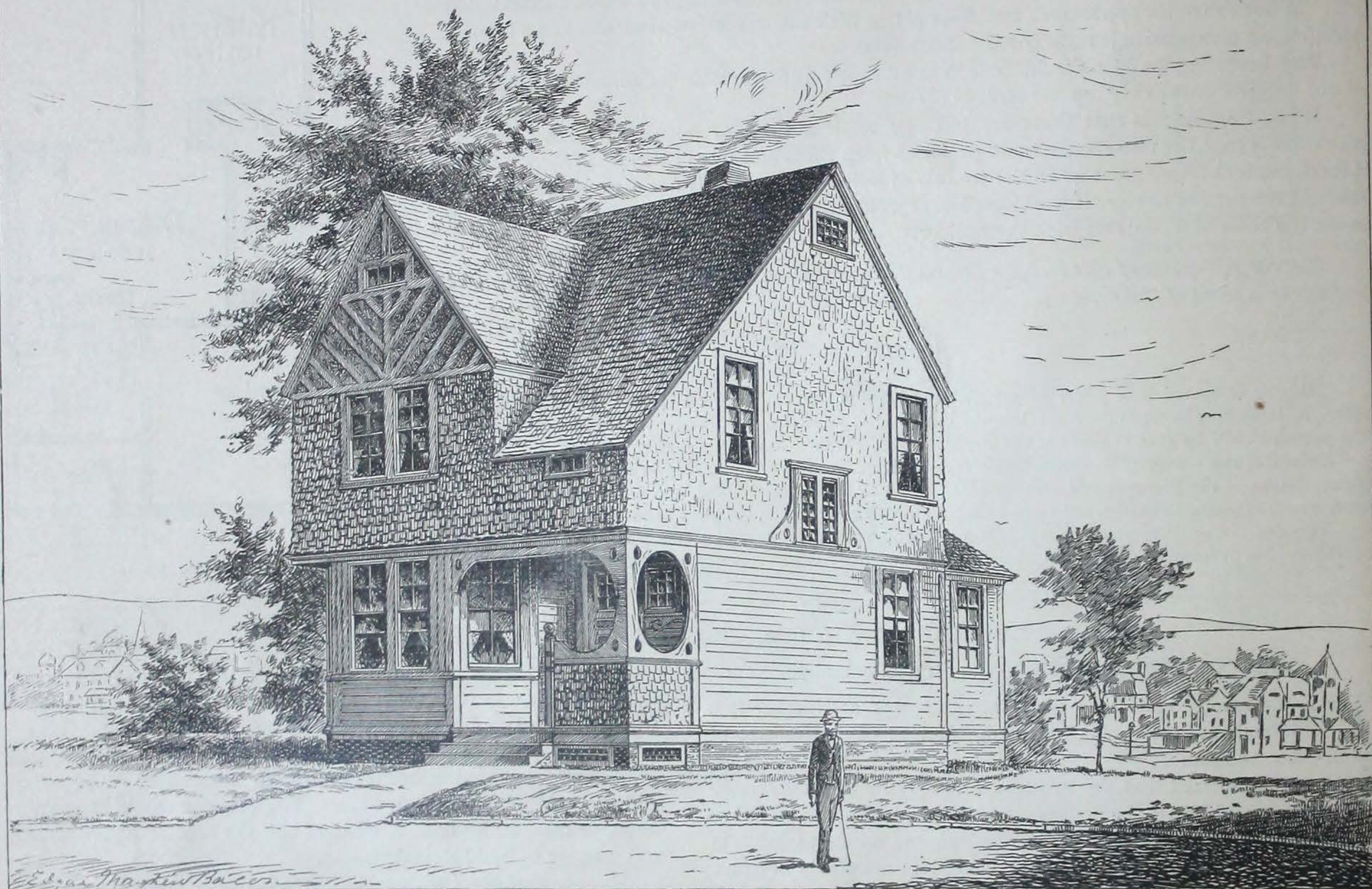
Co-operative Bldg Plan Assoc.
Architects.
New York.



FIRST FLOOR, DOUBLE HOUSE NO. 179



DOUBLE HOUSE DESIGN No. 179. FRONT ELEVATION



DESIGN No. 180. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 180

SIZE OF STRUCTURE: Front, 22 ft. Side, 36 ft., 6 in.
 SIZE OF ROOMS: See floor plans.



FIRST FLOOR. NO. 180

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft., 4 in.

MATERIALS: Foundation, posts set in concrete; First Story, clapboards; Second Story, shingles; Gables, shingles and half timbers; Roof, shingles.

COST: \$1,500, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—This design is a great favorite, which is a good point to know when building to rent or to sell. It is natural and wise to respect what many other people respect and admire. There is a quaint beauty in this design that is quite unusual.

The whole front of the parlor is one large bay-window—a delightful feature. All of the principal rooms on the first floor have large openings, intended for curtains or folding doors. A hat and coat closet in the hall. Handsome stairway. A very pretty porch with seat.

A cellar under part of the house with an inside stairway to it. A servant's bed-room can be finished off in the attic, where, also, there is plenty of room for storage.

A fireplace heater in the parlor or dining-room will thoroughly warm the two bed-rooms above, or indeed all four of the bed-rooms if the hall doors are left open.

With a cellar, and stone or brick foundations, the cost will be increased about \$200.



SECOND FLOOR. NO. 180

DESCRIPTION OF DESIGNS NUMBERS 181 AND 182

COST: \$1,375, each.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

THESE are simply modifications of the preceding design; the second floors are precisely the same. The first floors omit the kitchen extension which reduces the side length of the house to 27 feet.

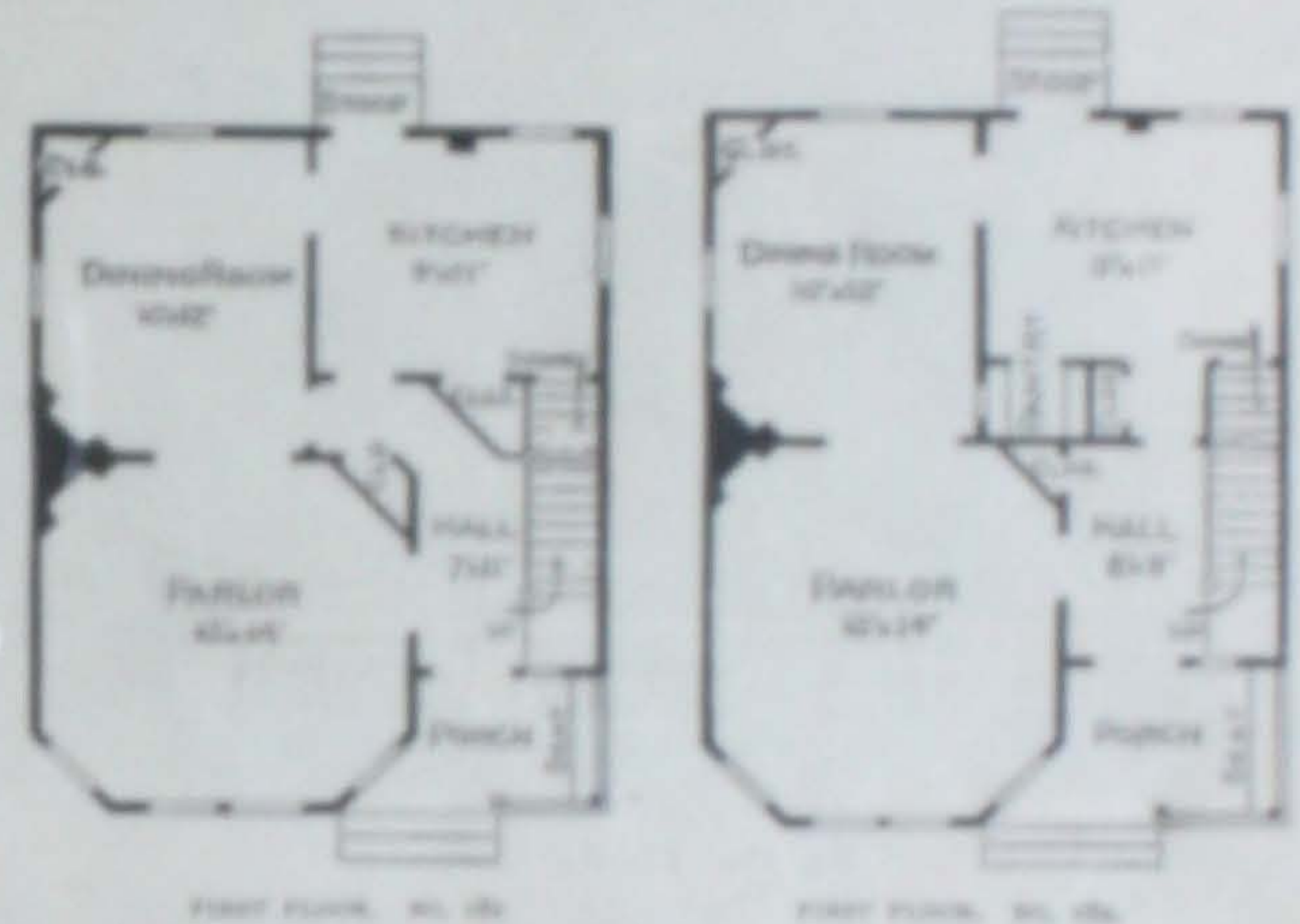
These two designs differ from each other only in the arrangement of partitions, which will be readily seen on the plans.

The man who has resolved to "stop paying rent"—to emancipate himself from the thralldom of the landlord, has taken a tremendous stride toward independence, and he should not let a kitchen extension or even a cellar obstruct his way. He can add the extension and dig the cellar at any time when his means and inclinations suggest.

In regard to the cost figures which we give in this work, we believe that our patrons desire exact information, therefore we give the actual cost (not calculating a builder's or contractor's profit), with a small percentage added for contingencies. If we wished to do so, we could not give a contractor's price, because that ranges all the way between the price asked by the honest carpenter, who is satisfied to get fair wages and ten per cent. profit on materials (if he furnishes them) and the prices asked by his more avaricious competitor, who wants twenty, thirty, forty, fifty and sometimes even a still greater per cent. of profit. With the aid of our bill of quantities the owner can buy all the materials and have the house built by day's work, which is the best way.

These designs and the preceding one have been well built a

number of times lately, by a responsible contractor, for the prices named, which shows that our estimate of actual cost is liberal enough to allow some profit. In no way does the architect profit by giving an owner wrong information as to cost. On the contrary he suffers by it. Yet interested builders always declare that architects' prices are wrong; that they are too low. Always too low—by no accident are they ever too high! They come to this conclusion from a mere glance of the plans in a book, which are necessarily small and imperfect. This misrepresentation is a real crying evil, its object being to get an unfairly high price for building. Every man should discountenance these fellows, as they stop improvements and retard the growth of a community.



DESCRIPTION OF DESIGN NUMBER 183

SIZE OF STRUCTURE: Front, 28 ft., 6 in. Side, 27 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 8 ft., 6 in. Second Story, 8 ft.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

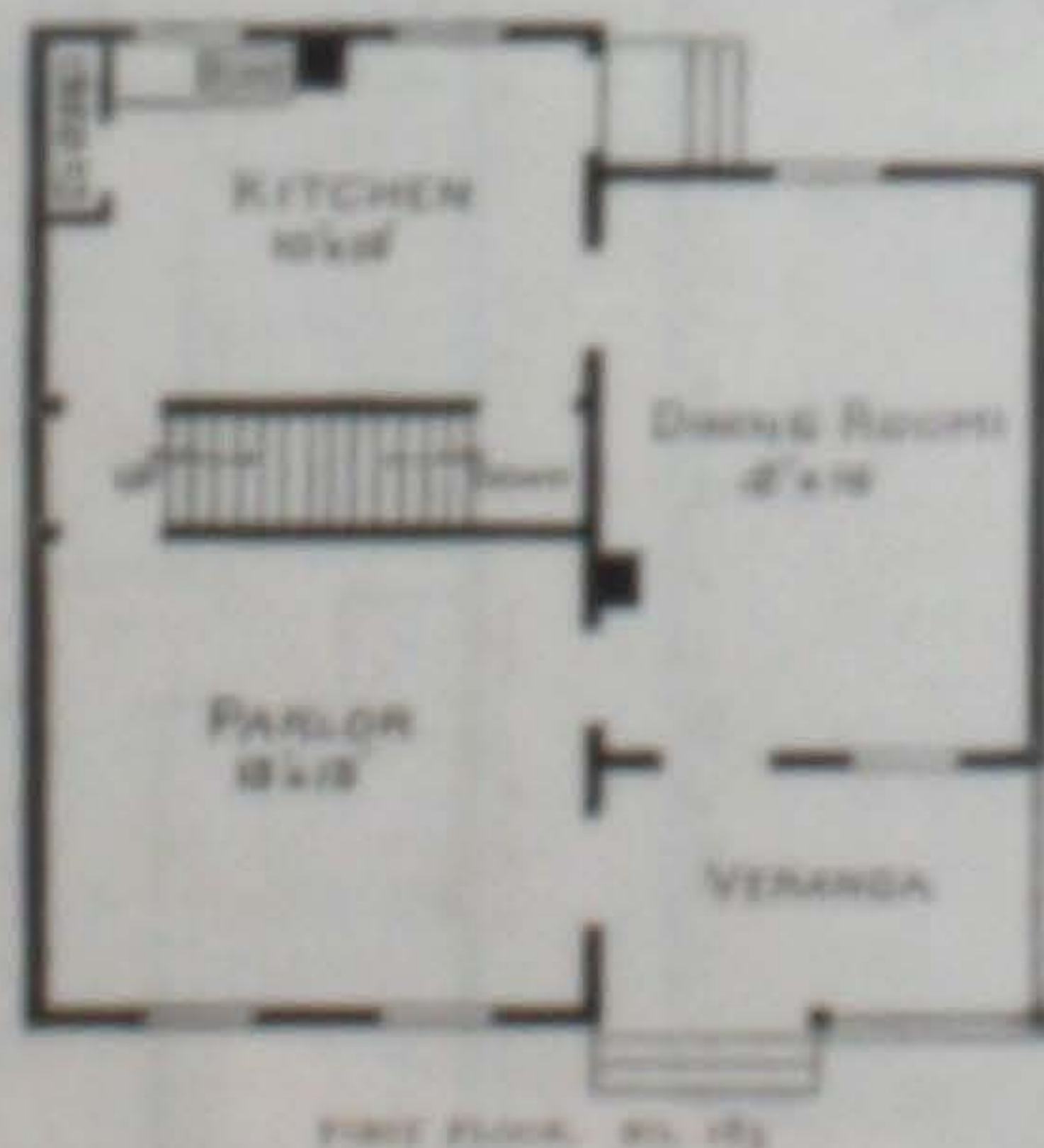
COST: \$1,100, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

placed much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Moulds, Staircase, Inside Finish, Colours, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

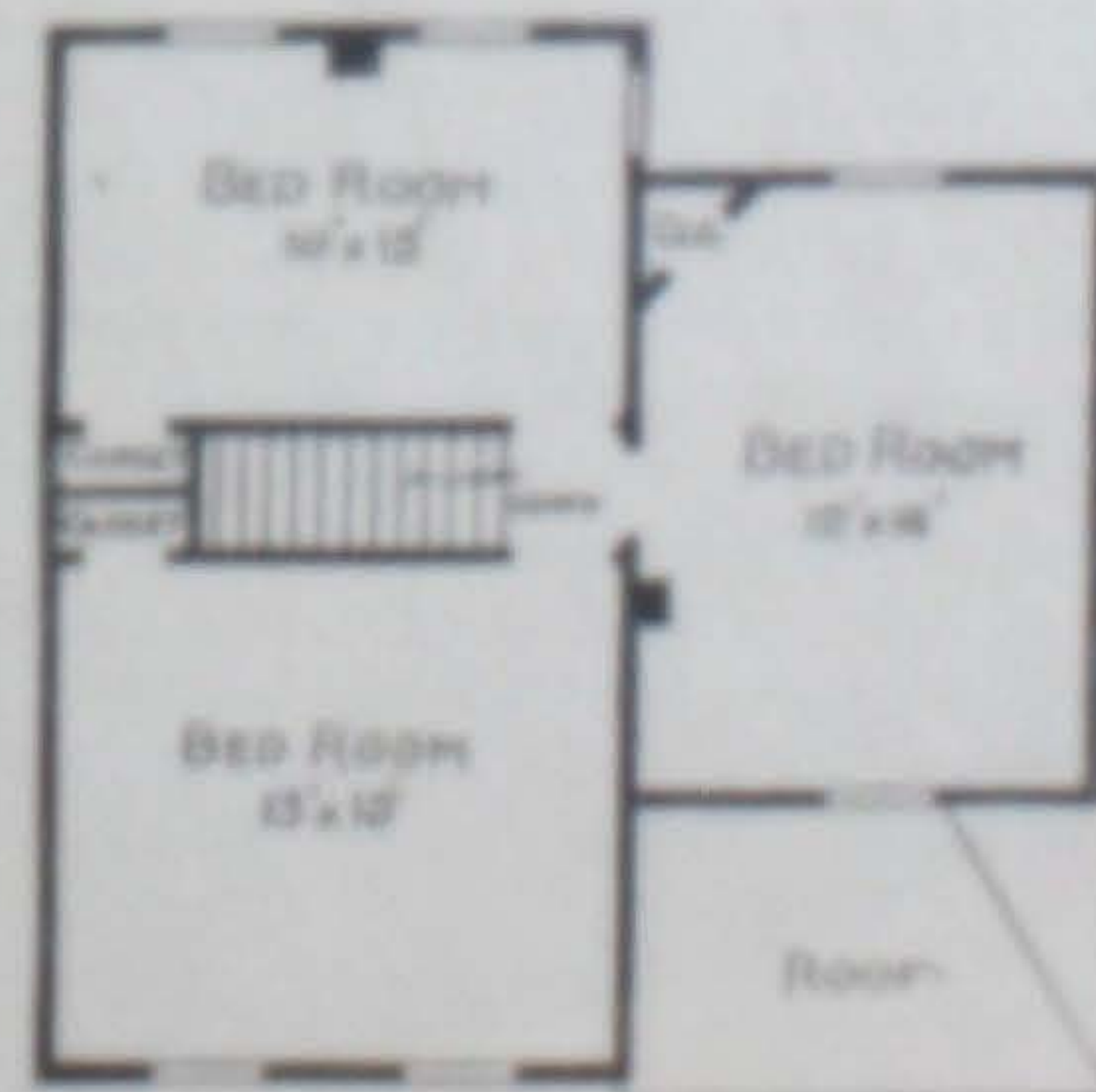
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials than may be best or cheapest in any locality.



FIRST FLOOR, NO. 183

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some



SECOND FLOOR, NO. 183

SPECIAL FEATURES.—The general outside appearance of this design is the same as Number 182. The plans are quite popular.

The same reduction in cost can be effected by setting on posts, omitting cellar, using plaster board, &c., that is suggested elsewhere



DESIGN No 180. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 180

SIZE OF STRUCTURE: Front, 22 ft. Side, 36 ft., 6 in.
 SIZE OF ROOMS: See floor plans.



FIRST FLOOR. NO. 180

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft., 4 in.

MATERIALS: Foundation, posts set in concrete: First Story, clapboards; Second Story, shingles; Gables, shingles and half timbers; Roof, shingles.

COST: \$1,500, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—This design is a great favorite, which is a good point to know when building to rent or to sell. It is natural and wise to respect what many other people respect and admire. There is a quaint beauty in this design that is quite unusual.

The whole front of the parlor is one large bay-window—a delightful feature. All of the principal rooms on the first floor have large openings, intended for curtains or folding doors. A hat and coat closet in the hall. Handsome stairway. A very pretty porch with seat.

A cellar under part of the house with an inside stairway to it. A servant's bed-room can be finished off in the attic, where, also, there is plenty of room for storage.

A fireplace heater in the parlor or dining-room will thoroughly warm the two bed-rooms above, or indeed all four of the bed-rooms if the hall doors are left open.

With a cellar, and stone or brick foundations, the cost will be increased about \$200.



SECOND FLOOR. NO. 180

DESCRIPTION OF DESIGNS NUMBERS 181 AND 182

COST: \$1,375, each.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

THESE are simply modifications of the preceding design; the second floors are precisely the same. The first floors omit the kitchen extension which reduces the side length of the house to 27 feet.

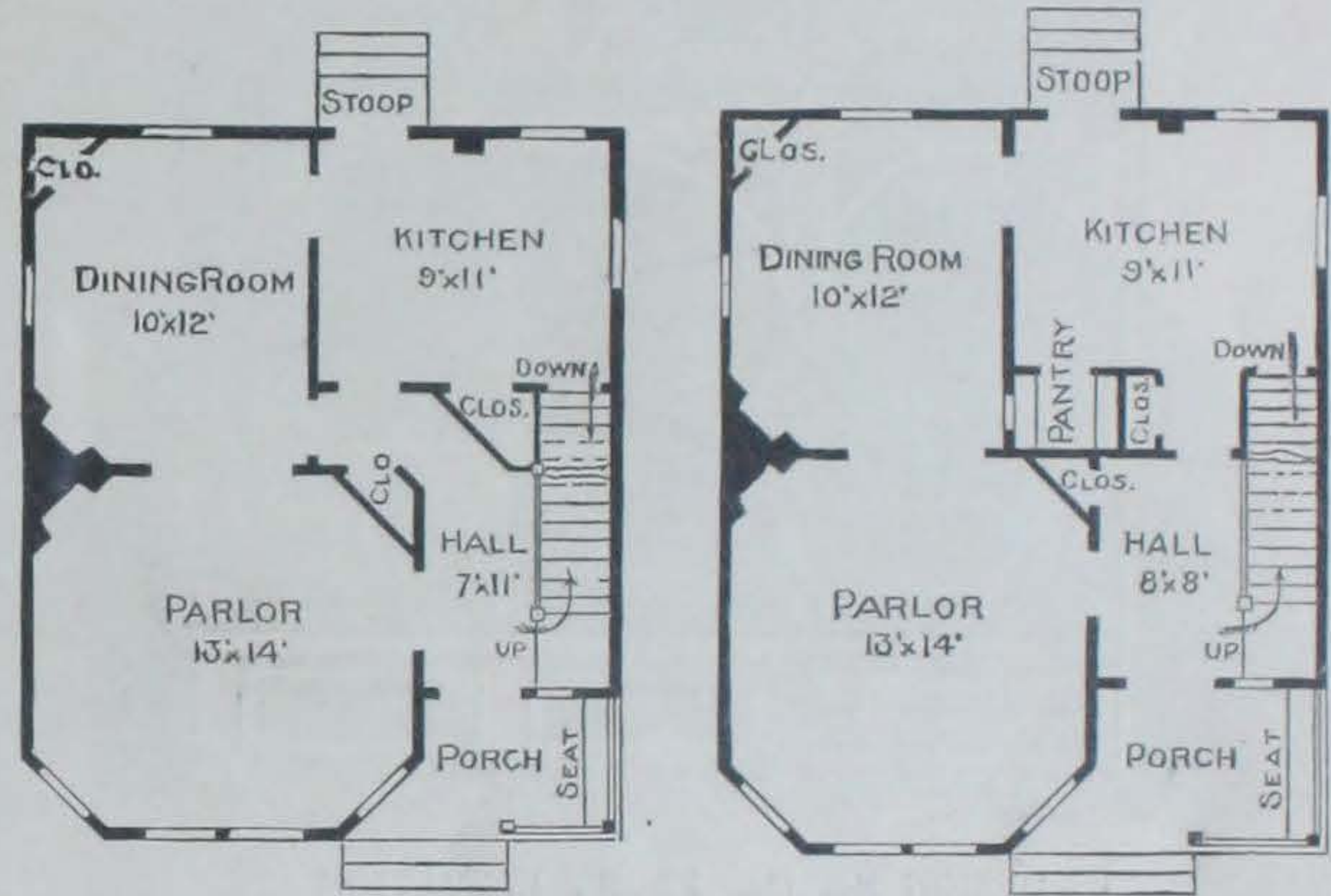
These two designs differ from each other only in the arrangement of partitions, which will be readily seen on the plans.

The man who has resolved to "stop paying rent"—to emancipate himself from the thralldom of the landlord, has taken a tremendous stride toward independence, and he should not let a kitchen extension or even a cellar obstruct his way. He can add the extension and dig the cellar at any time when his means and inclinations suggest.

In regard to the cost figures which we give in this work, we believe that our patrons desire exact information, therefore we give the actual cost (not calculating a builder's or contractor's profit), with a small percentage added for contingencies. If we wished to do so, we could not give a contractor's price, because that ranges all the way between the price asked by the honest carpenter, who is satisfied to get fair wages and ten per cent. profit on materials (if he furnishes them) and the prices asked by his more avaricious competitor, who wants twenty, thirty, forty, fifty and sometimes even a still greater per cent. of profit. With the aid of our bill of quantities the owner can buy all the materials and have the house built by day's work, which is the best way.

These designs and the preceding one have been well built a

number of times lately, by a responsible contractor, for the prices named, which shows that our estimate of actual cost is liberal enough to allow some profit. In no way does the architect profit by giving an owner wrong information as to cost. On the contrary he suffers by it. Yet interested builders always declare that architects' prices are wrong; that they are too low. Always too low—by no accident are they ever too high! They come to this conclusion from a mere glance of the plans in a book, which are necessarily small and imperfect. This misrepresentation is a real crying evil, its object being to get an unfairly high price for building. Every man should discountenance these fellows, as they stop improvements and retard the growth of a community.



FIRST FLOOR, NO. 181

FIRST FLOOR, NO. 182.

DESCRIPTION OF DESIGN NUMBER 183

SIZE OF STRUCTURE: Front, 28 ft., 6 in. Side, 27 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 8 ft., 6 in.; Second Story, 8 ft.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

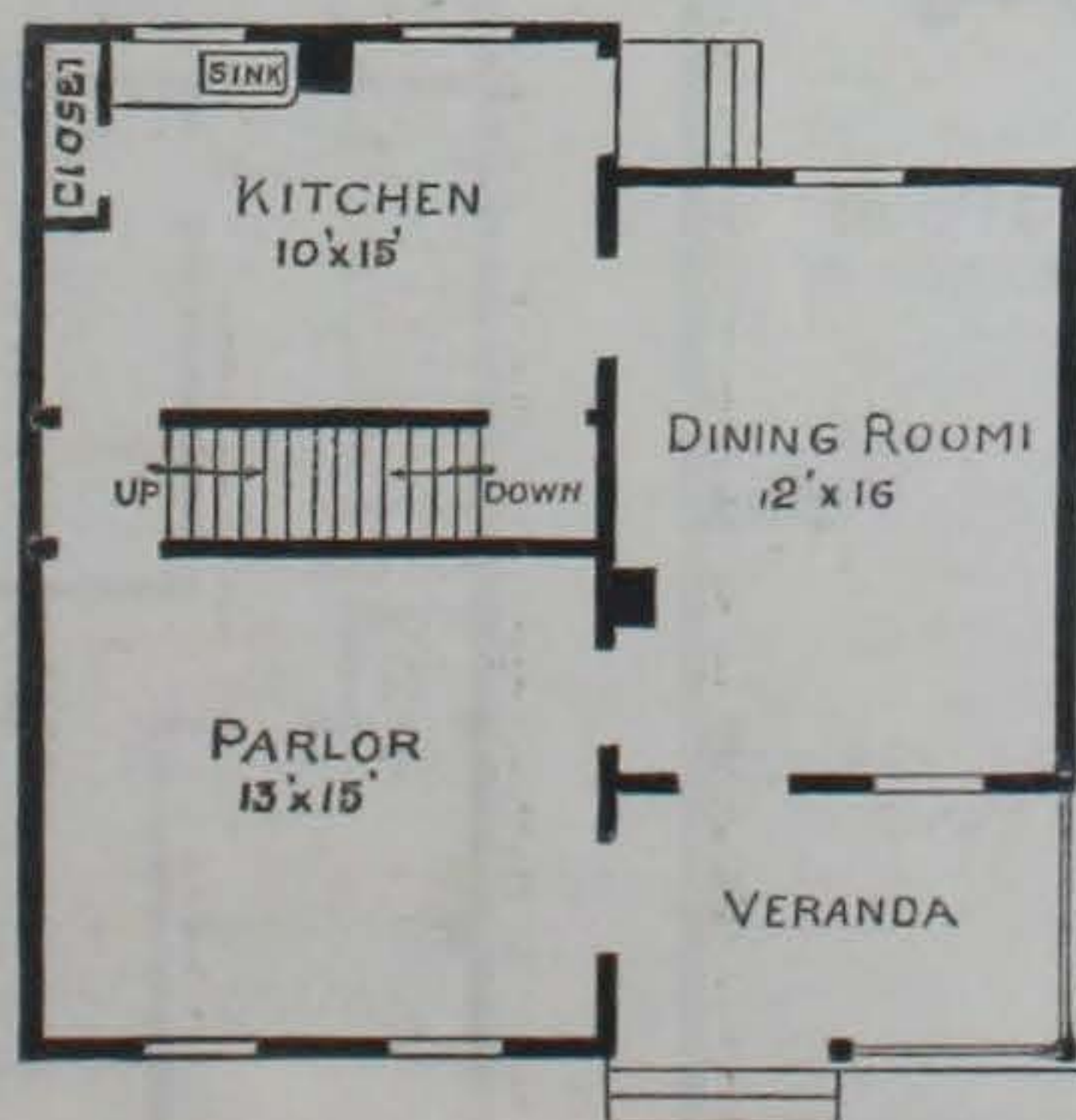
COST: \$1,100, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

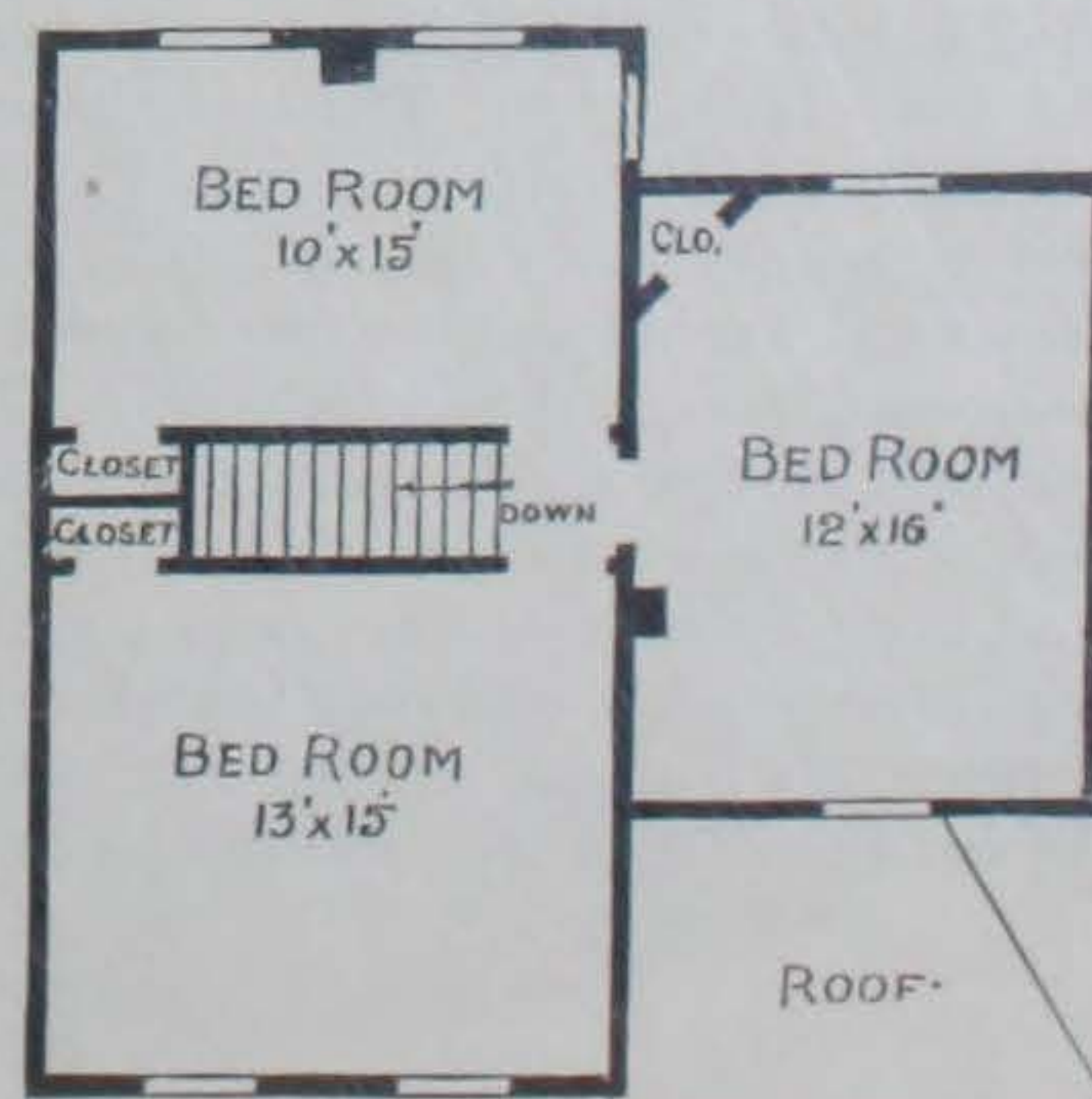
places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.



FIRST FLOOR, NO. 183



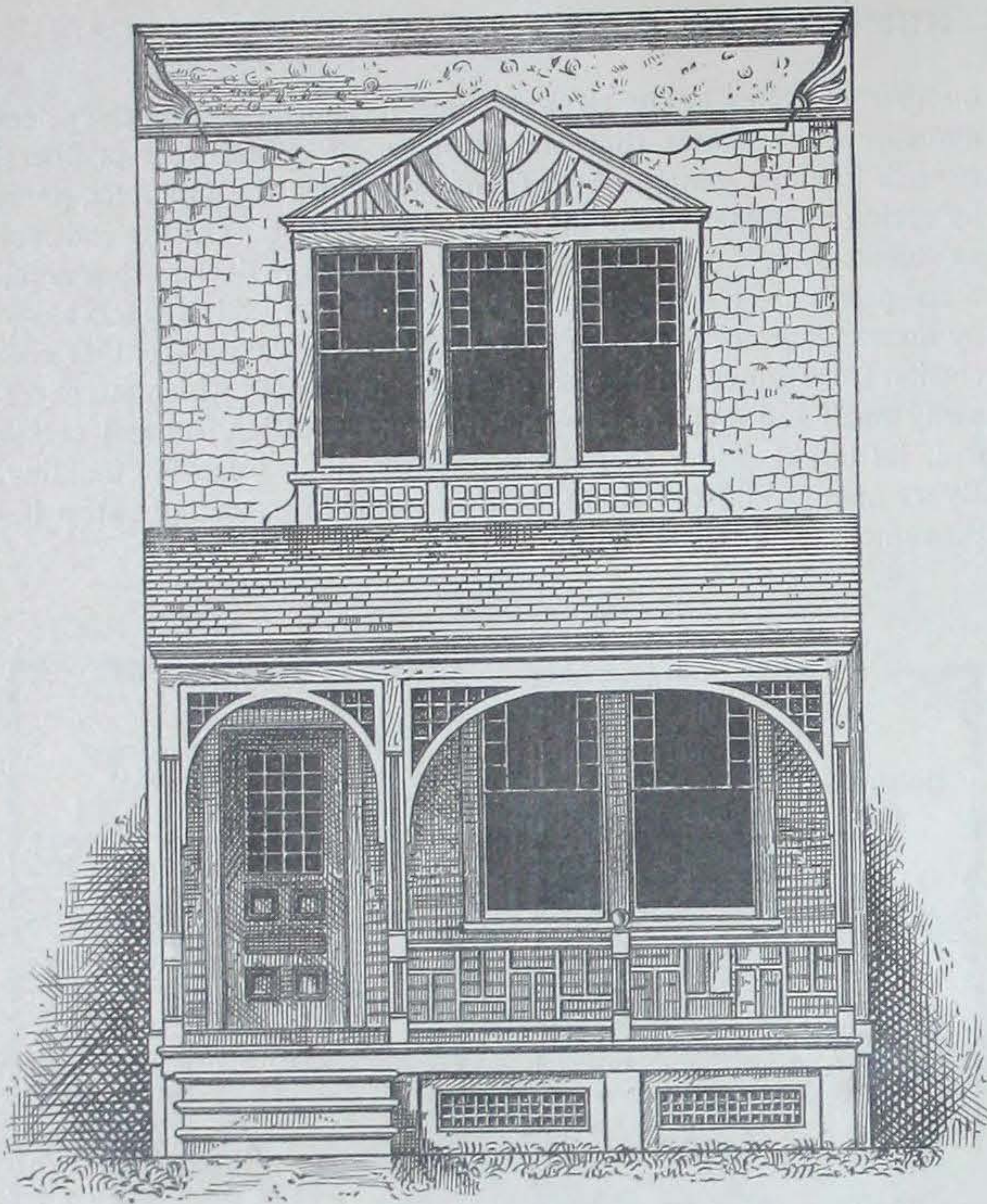
SECOND FLOOR, NO. 183

NOTES

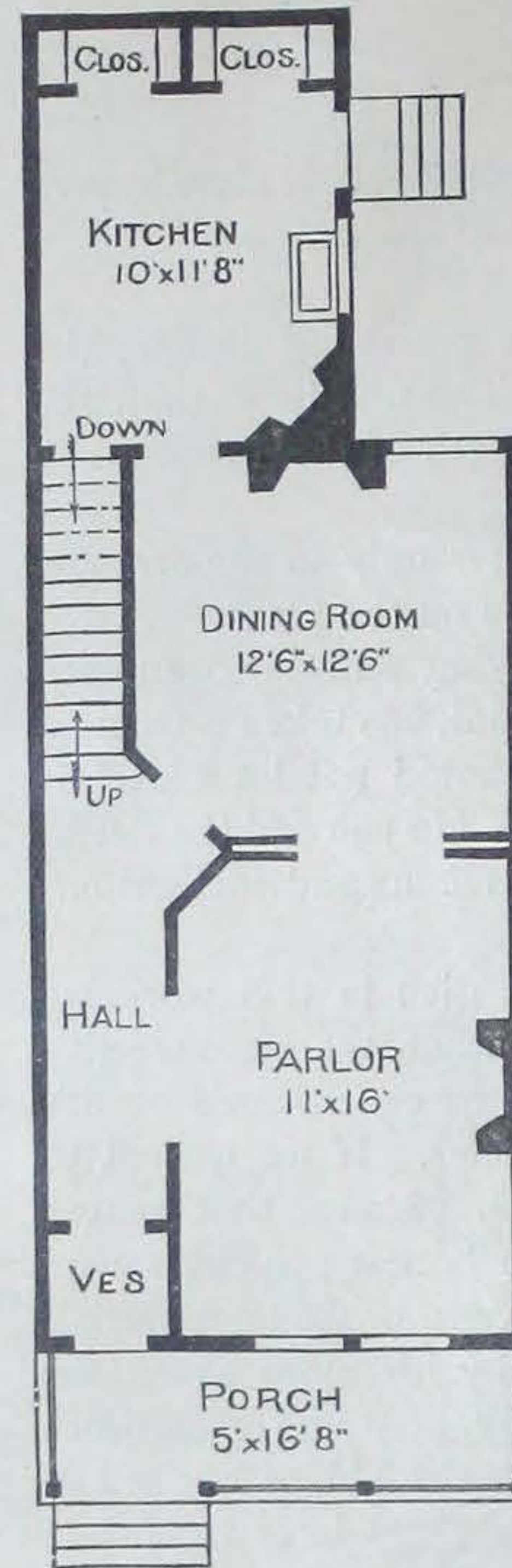
The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some

SPECIAL FEATURES.—The general outside appearance of this design is the same as Number 180. The plans are quite popular.

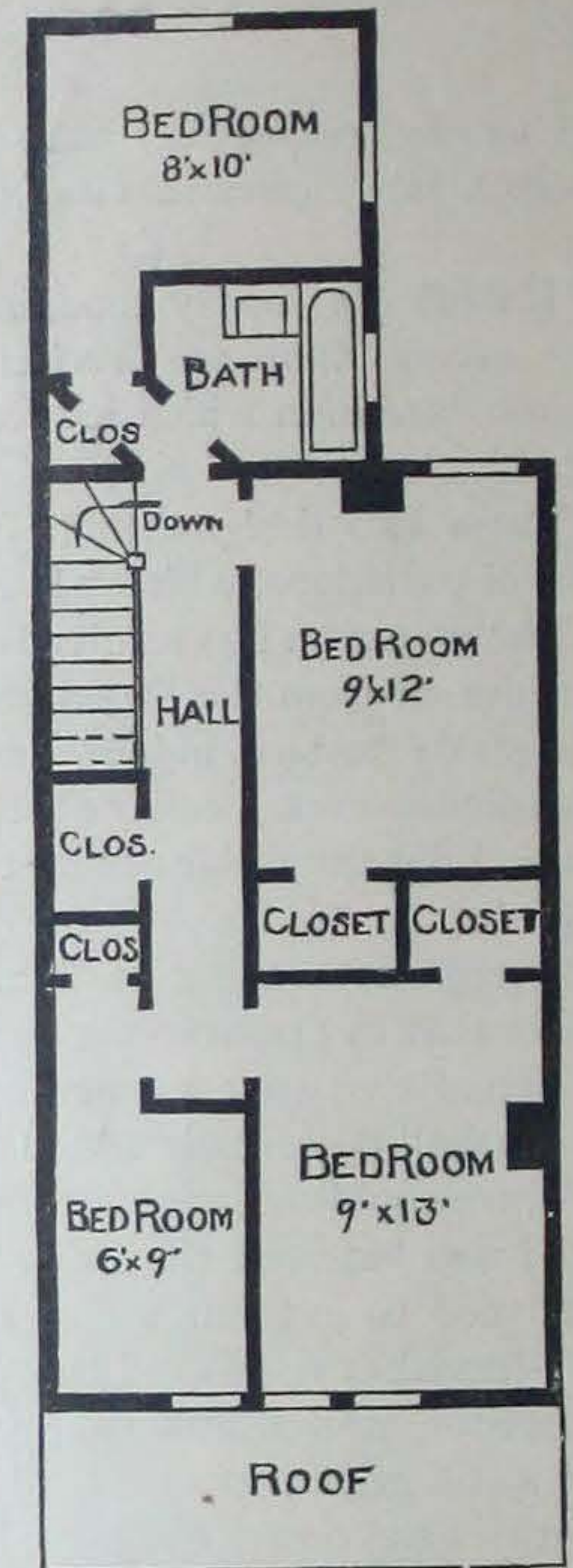
The same reduction in cost can be effected by setting on posts, omitting cellar, using plaster board, &c., that is suggested elsewhere



DESIGN No. 184. FRONT ELEVATION



FIRST FLOOR. NO. 184



SECOND FLOOR. NO. 184

DESCRIPTION OF DESIGN NUMBER 184

SIZE OF STRUCTURE: Front, 16 ft., 8 in. Side, 44 ft., 9 in., including extension. Side 49 ft., 9 in., including porch.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft., 9 in.; Second Story, 8 ft., 6 in.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles (in front); Roof, tin.

COST: \$1,520, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

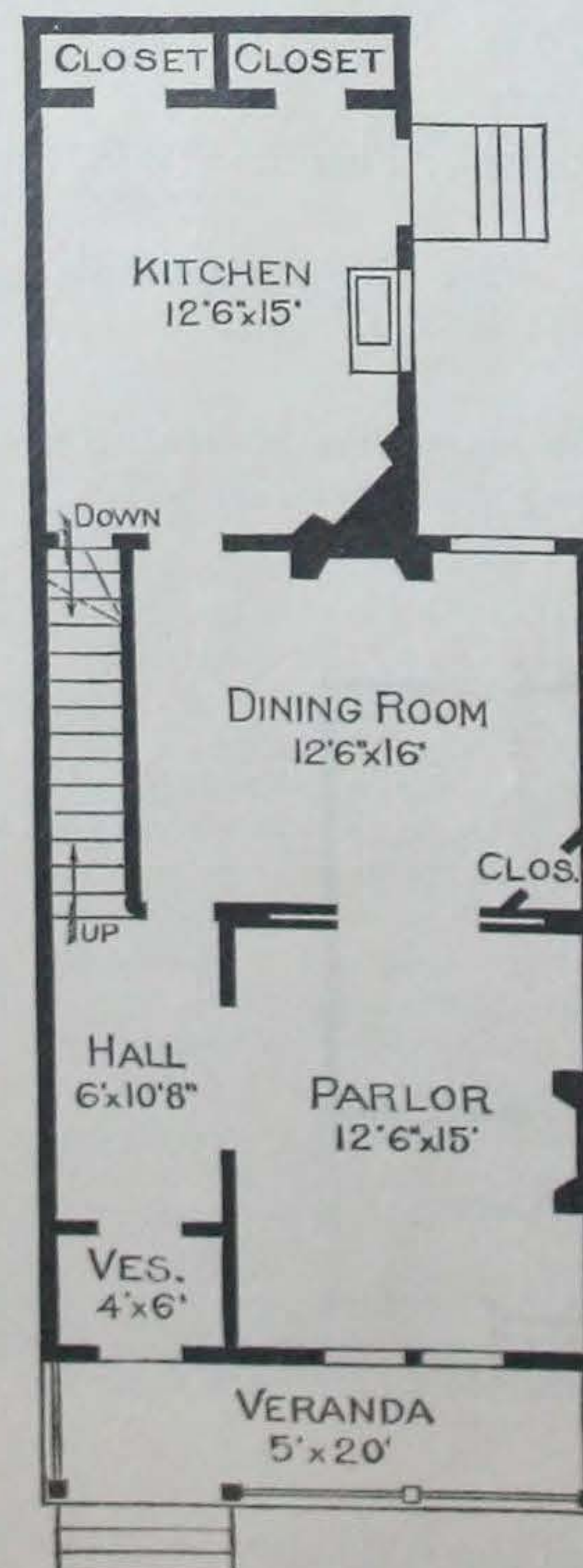
SPECIAL FEATURES.—This is a design for a narrow city lot.

A cellar under the whole house, with a laundry under the rear extension. Stationary tubs. There is sufficient air space over the second story ceiling to insure cool sleeping rooms in summer. The front of the second story is shingled. The half timbers over the triple windows and the new and pretty cornice at the top give this front a good deal of beauty and character. The small narrow windows, set far apart and the hideous bracketed cornices which we usually see in these cheap fronts, are positively ugly. The average carpenter, however, will design and construct just such a front every time, if the designing is left to him. He may be a very good carpenter, too, and keep up with the times in construction and mechanical matters, which is his business; but when it comes to designing, which is not his business, but the architect's, he brings forth the styles of his grandfather as quite good enough for this generation.

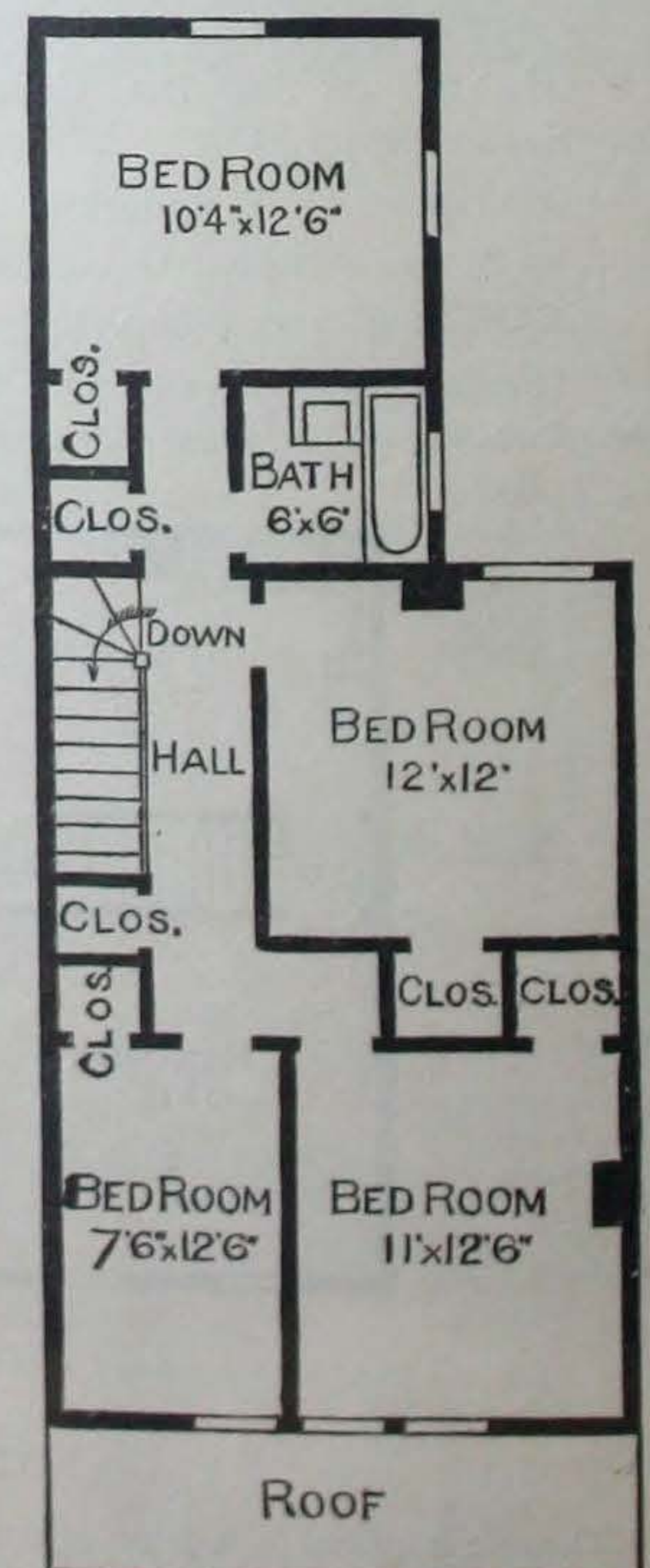
DESCRIPTION OF DESIGN NUMBER 185

This is an enlarged modification of the preceding design, being 20 feet wide and deeper. COST: \$1,800. Cellar under part of the house only.

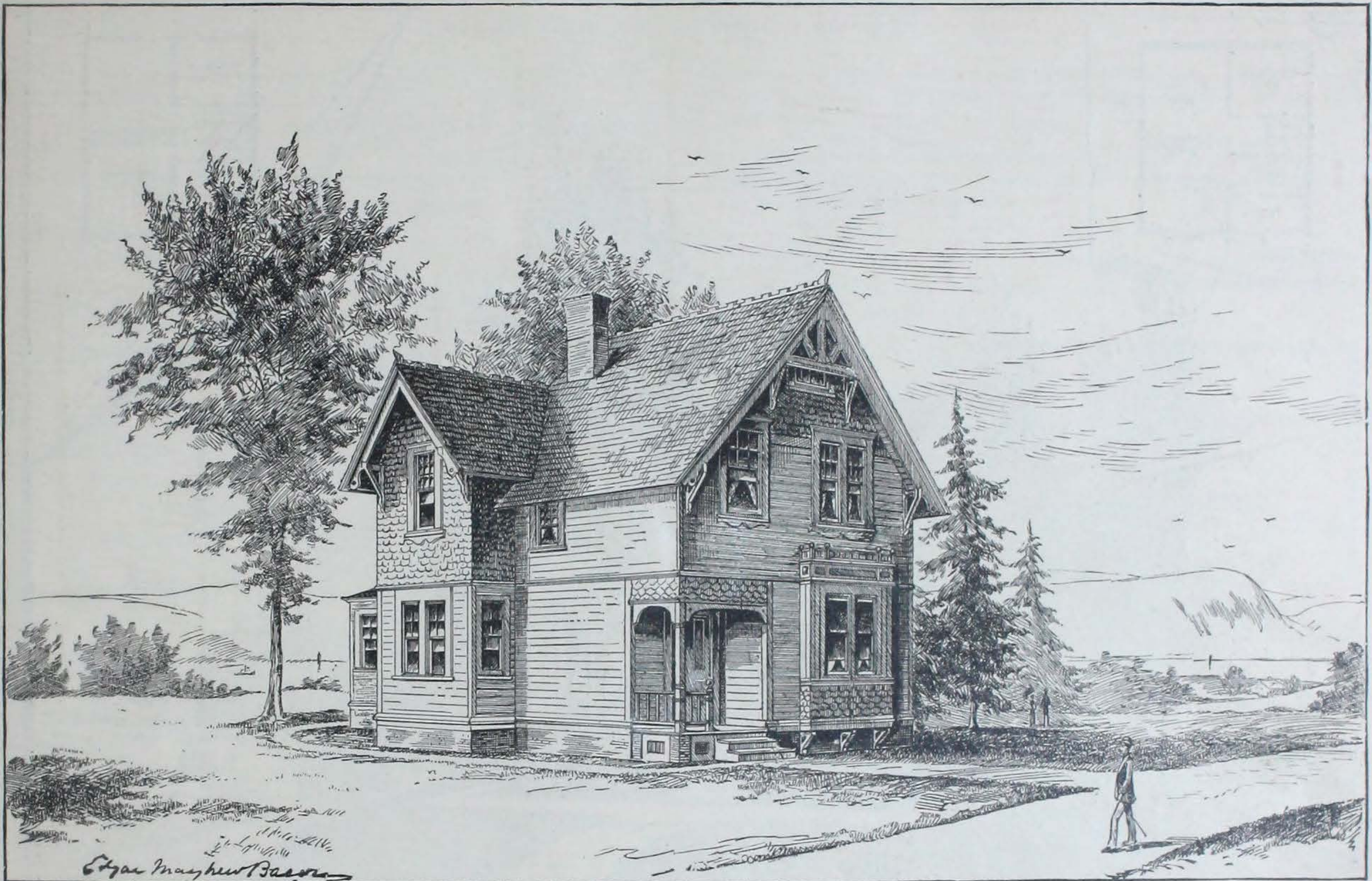
We have a still larger modification of this design, being 21 feet wide, and having a bay-window in the dining-room.



FIRST FLOOR. NO. 185



SECOND FLOOR. NO. 185



DESIGN No. 186. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 186

SIZE OF STRUCTURE: Front, 28 ft., 9 in. Side, 47 ft., including kitchen.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft., 6 in.; Second Story, 9 ft.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, clapboards, Gables, shingles; Roof, shingles.

COST: \$1,650, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

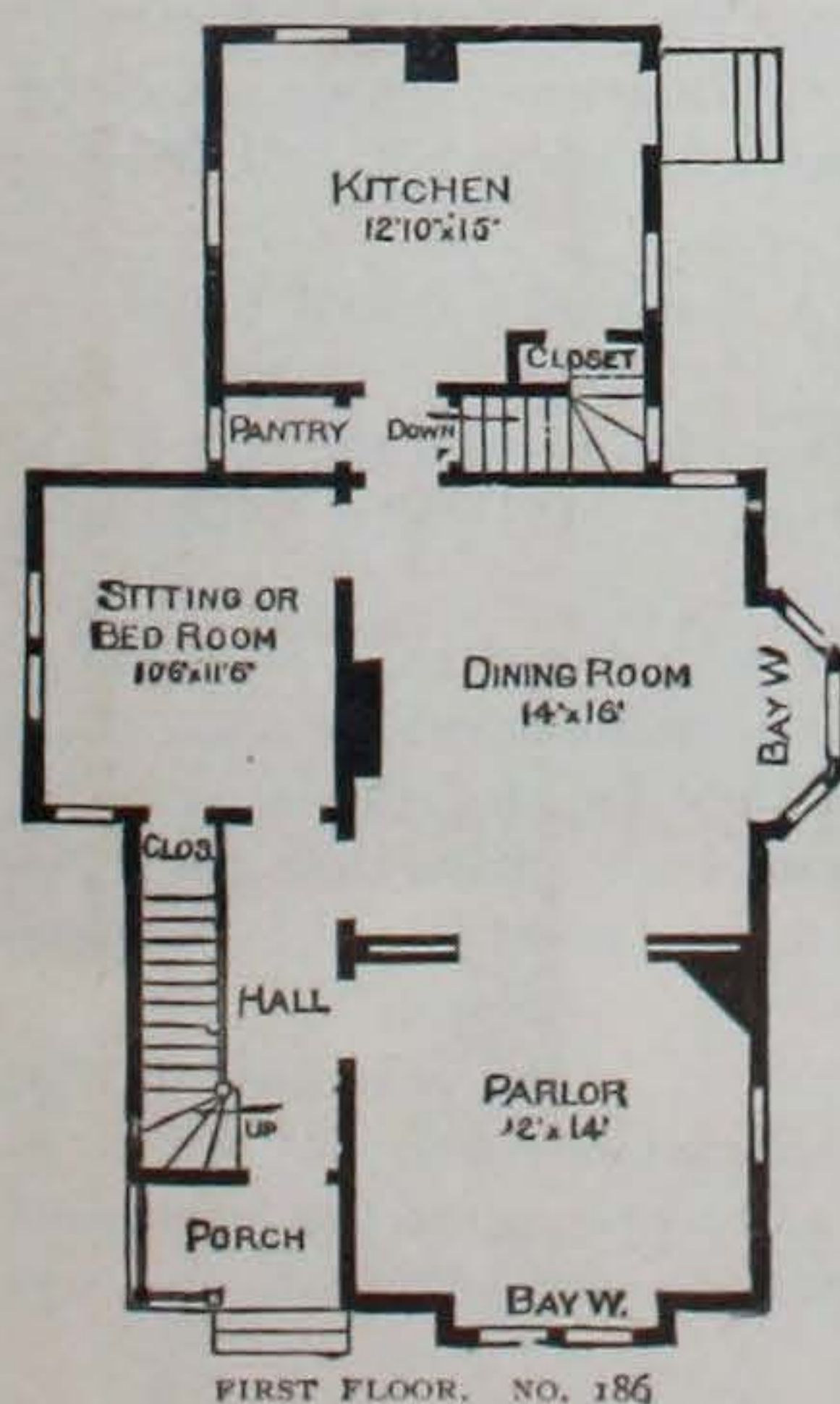
SPECIAL FEATURES.—These plans are good, economizing all the room to great advantage, making a very complete house. The exterior is quiet and unpretentious, but in thorough good taste and therefore pleasing. Modern styles of painting look very well on a design like this.

Cellar under half the house.

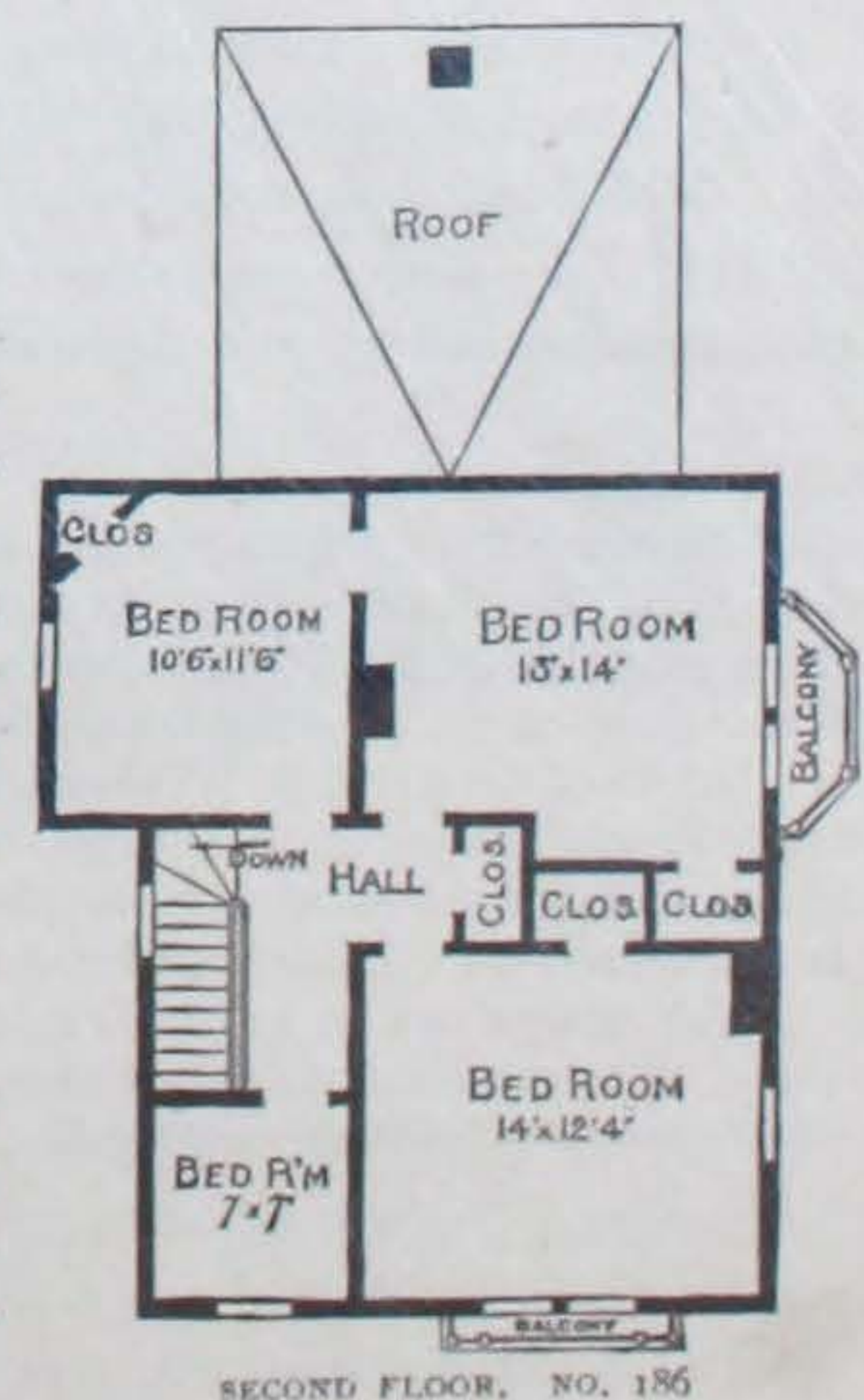
The bay-windows and projection afford fine outlooks from every side.

The strong feature of this design is that it affords a great deal of room for a small outlay.

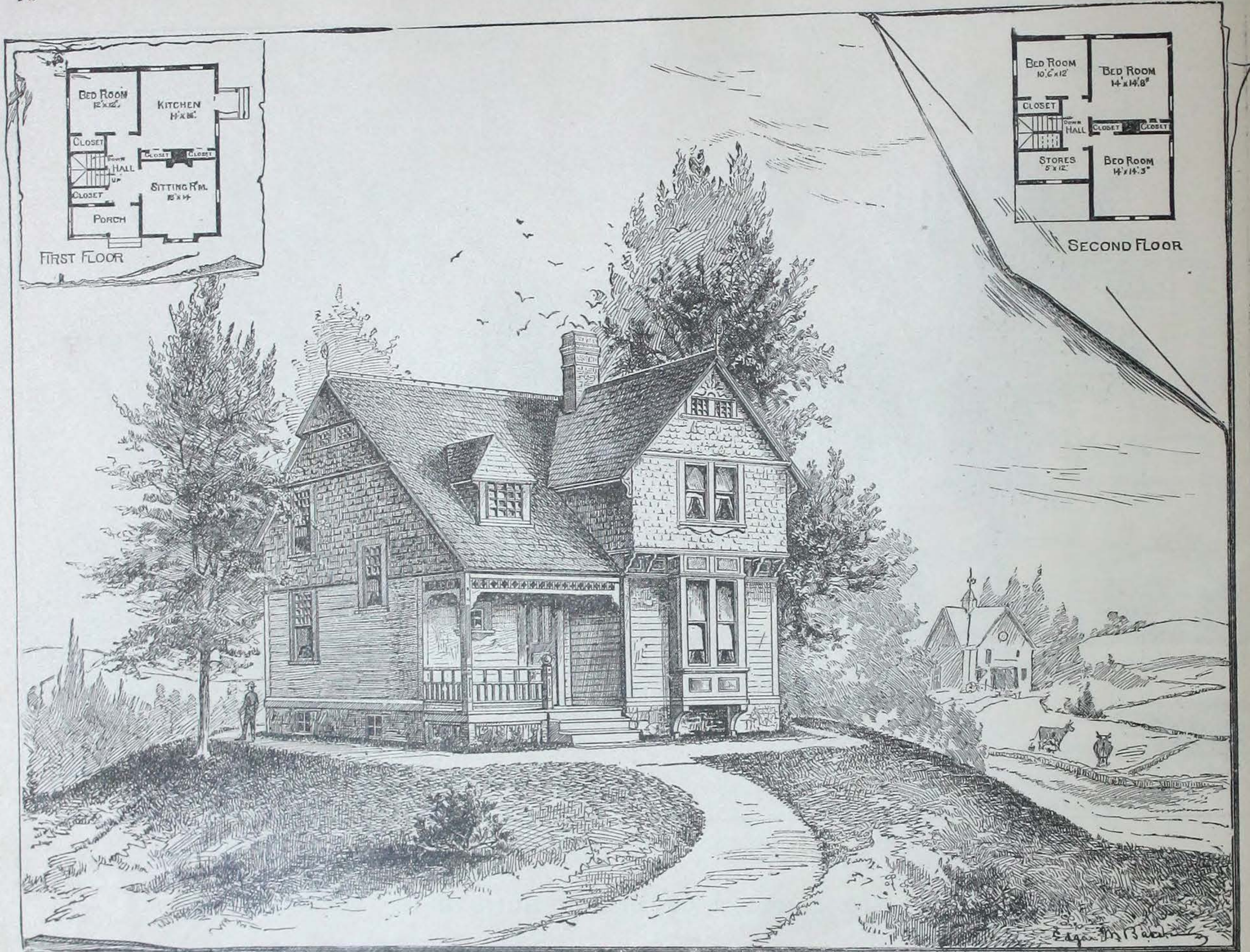
The accomplishment of this is a rare achievement. It is very easy to design a house regardless of cost and very difficult to economize at every point, without sacrificing beauty and substantial worth. We believe that all owners and builders who examine our working plans and specifications give us credit for thorough work and a good deal of special knowledge in this class of designs.



FIRST FLOOR, NO. 186



SECOND FLOOR, NO. 186



DESIGN No. 187. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 187

SIZE OF STRUCTURE: Front, 27 ft., 6 in. Side, 30 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft.; Second Story, 8 ft.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$1,500, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—There is a cellar under the whole house, with both an inside and an outside stairway to it.

The good housekeeper will notice the very ample closet and

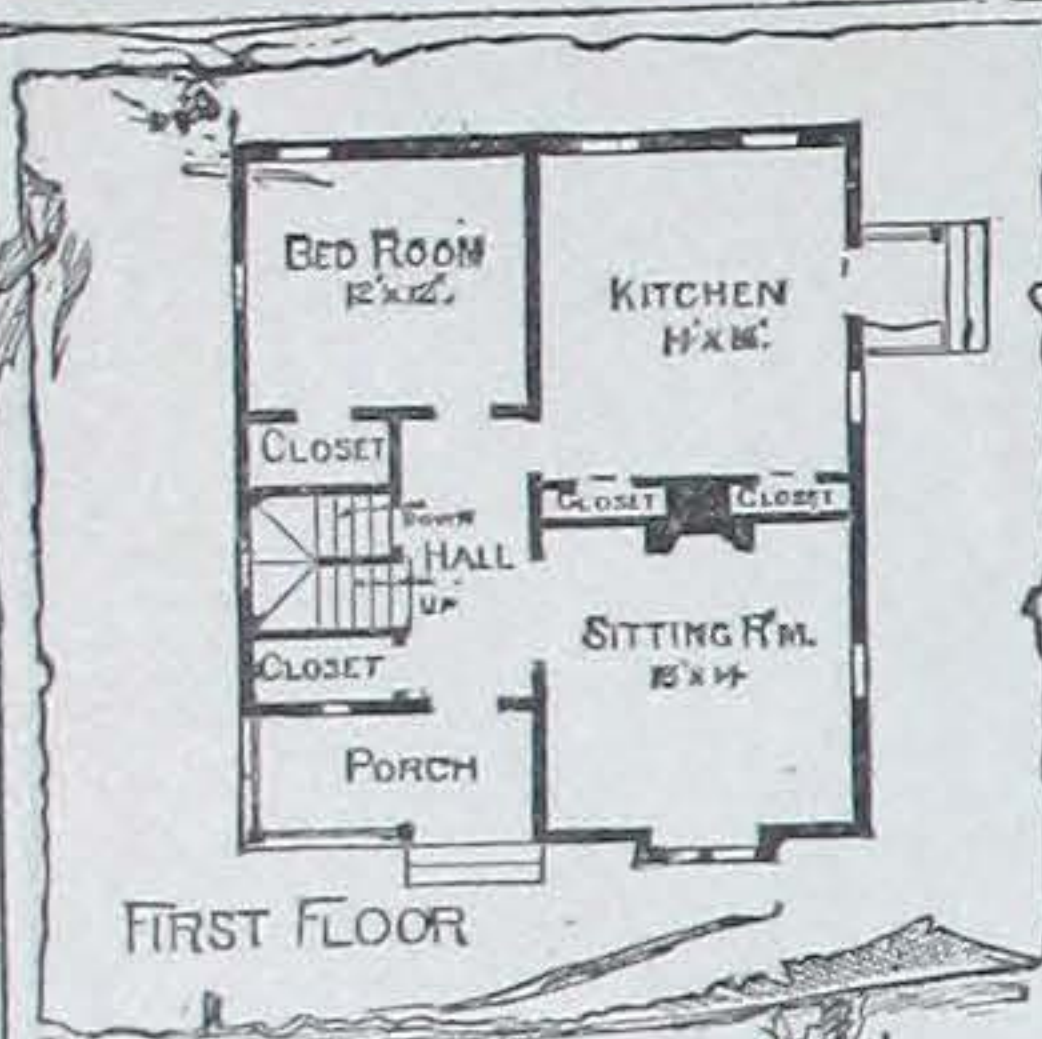
store room. First of all there is a large closet in the hall where the men folks will hang up their coats and hats with great regularity after a little disciplining. Then there are closets all over the house and a large, lighted store-room. Plenty of closets is a prevailing feature in all of our plans, however. The refinement of modern life requires so much now in the way of household goods and clothing, that ample provision must be made for storing it and keeping it in order.

The exterior of this design has a touch of Colonial feeling—a style that is growing in popularity.

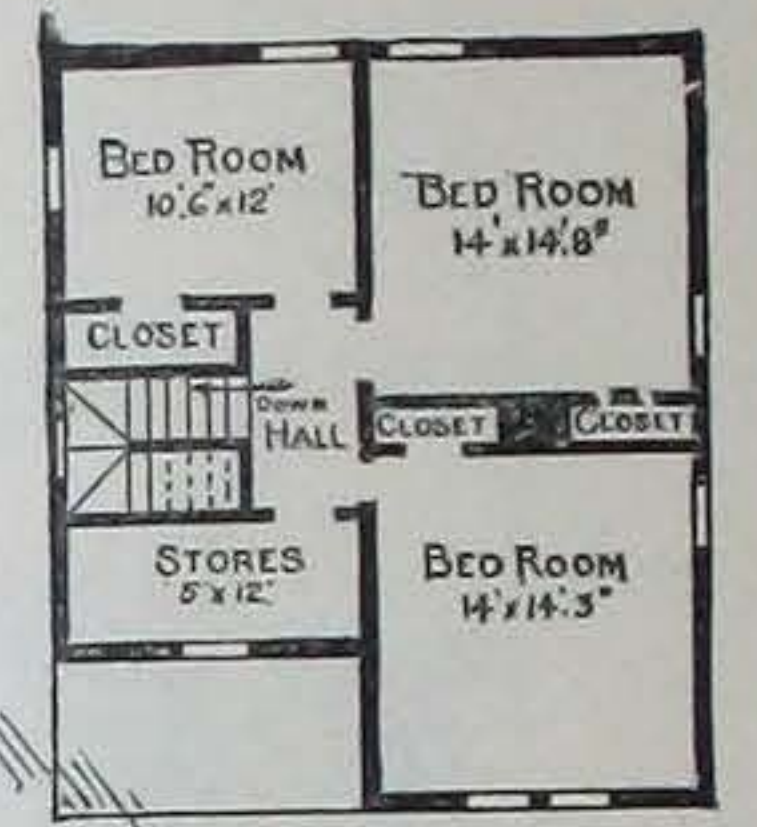
With brick or stone piers or posts for foundation the cost would be reduced; and without cellar (or only a small cellar with plank walls) the cost would be greatly reduced.

Very few carpenters are familiar with the details of Colonial, "Queen Anne," and other new styles of architecture, because these styles are of recent origin. While they are, for the most part, simple and inexpensive—actually more inexpensive than old styles—the most skillful workman cannot make a good job without specifications and drawings of the details.

A very ignorant carpenter is always quite vehement in his denunciation of drawings and specifications; one not quite so ignorant, is not quite so vehement, and so on, up to the intelligent workman, who is always glad to have them—who, indeed, often will not work without them.



FIRST FLOOR



SECOND FLOOR

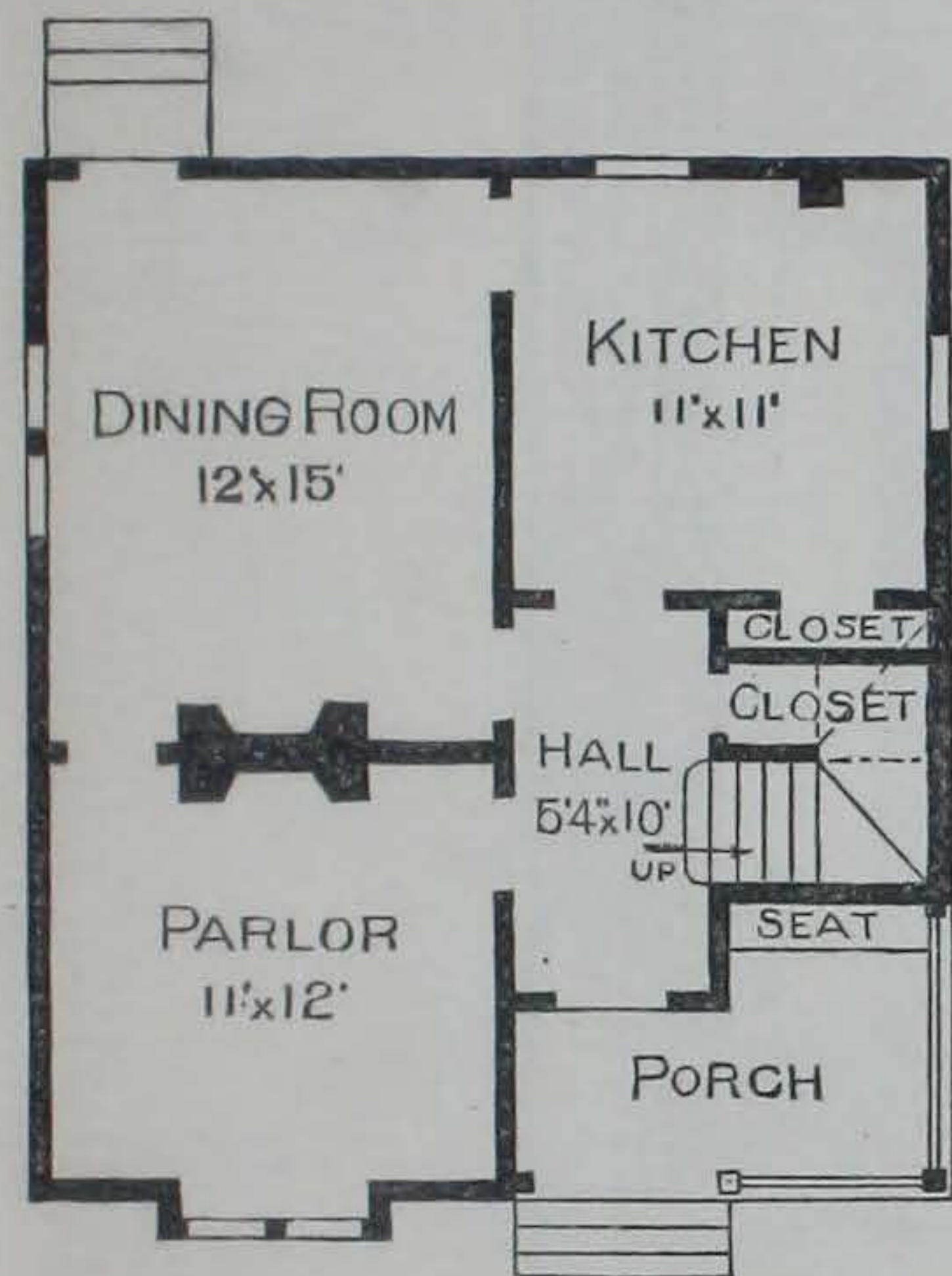
DESCRIPTION OF DESIGN NUMBER 188

SIZE OF STRUCTURE: Front, 24 ft., 6 in. Side, 27 ft., 6 in.
SIZE OF ROOMS: See floor plans.
HEIGHT OF STORIES: First Story, 8 ft., 6 in.; Second Story, 8 ft.

MATERIALS: Foundation, wood posts set in concrete, or brick piers; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$925, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]



FIRST FLOOR. NO. 188

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

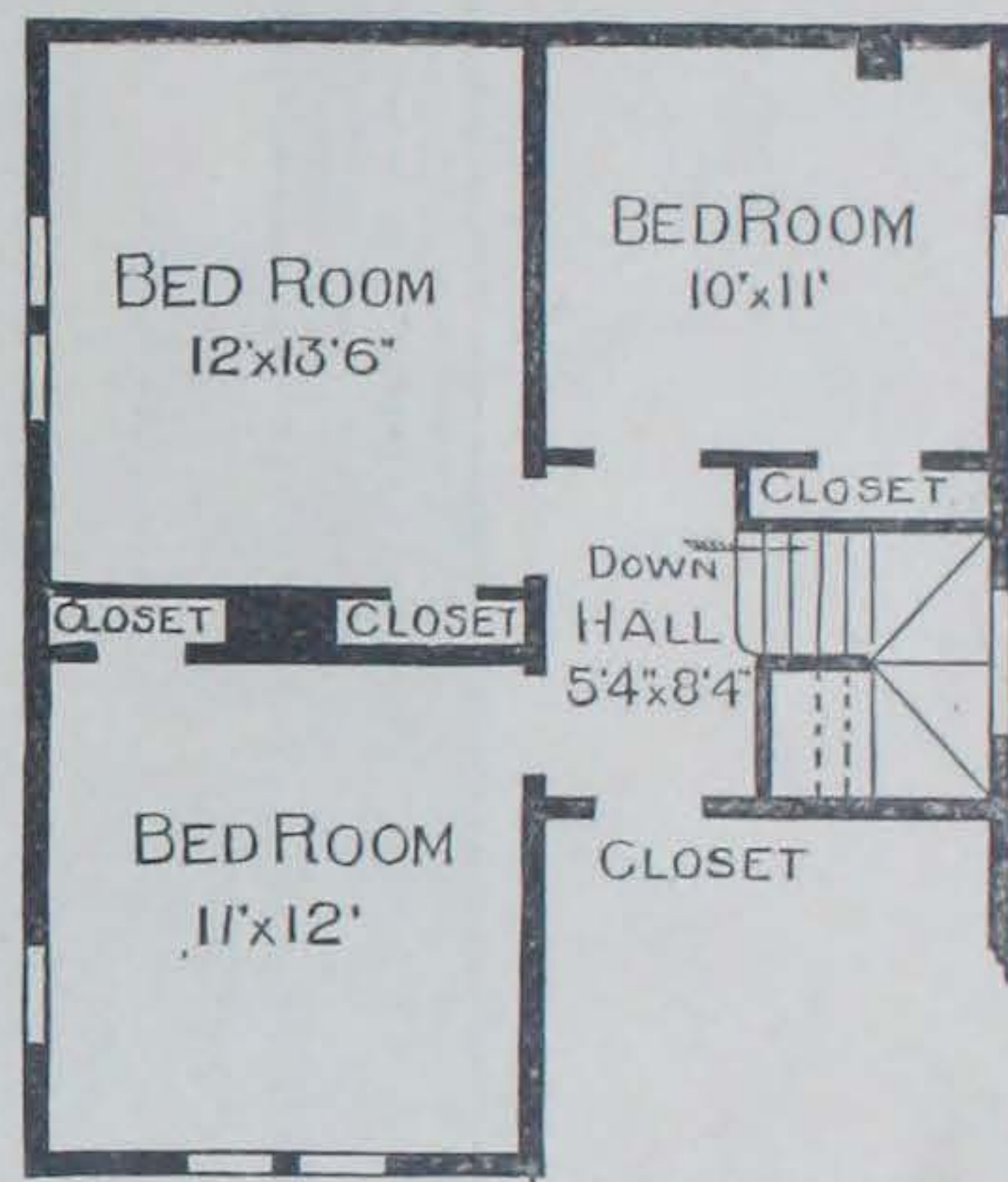
Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and dis-

tinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—The exterior is in the same style as the preceding design, and the accommodations inside are much the same. Being smaller and set on posts the cost is much less. With stone or brick foundations and a cellar under the whole house the cost is increased \$200. Persons who have built this house are very much pleased with it.

When this house is built for Summer occupancy only, or in a warm climate, the porch should be extended into a veranda around the side. This is not a very costly addition, and adds greatly to comfort and convenience during the hot weather.



SECOND FLOOR. NO. 188

DESCRIPTION OF DESIGN NUMBER 189

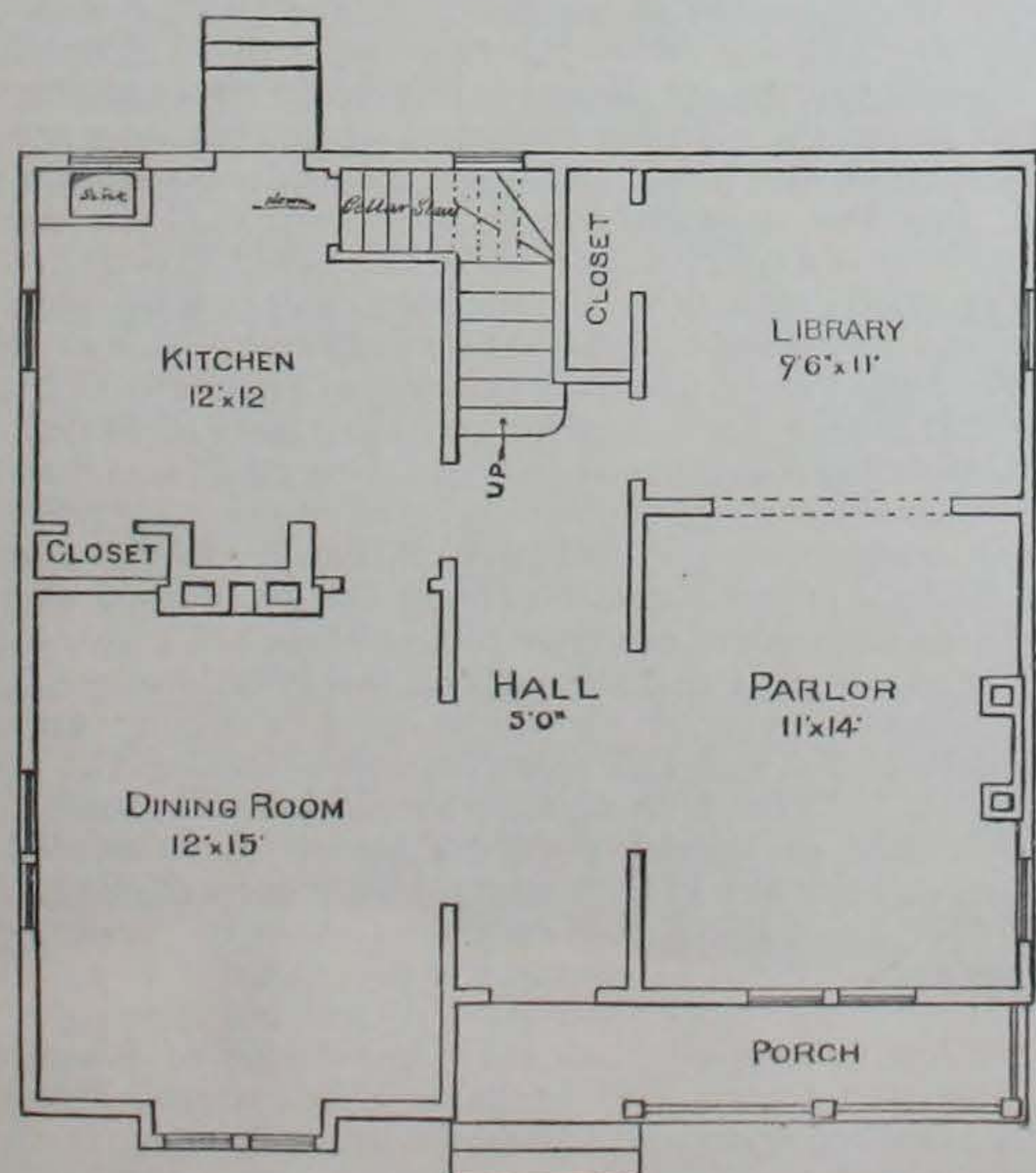
SIZE OF STRUCTURE: Front, 30 ft. Side, 28 ft., 6 in.
SIZE OF ROOMS: See floor plans.
HEIGHT OF STORIES: Cellar, 6 ft., 6 in. First Story, 9 ft.; Second Story, 8 ft.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, clapboards; Gables, clapboards; Roof, shingles.

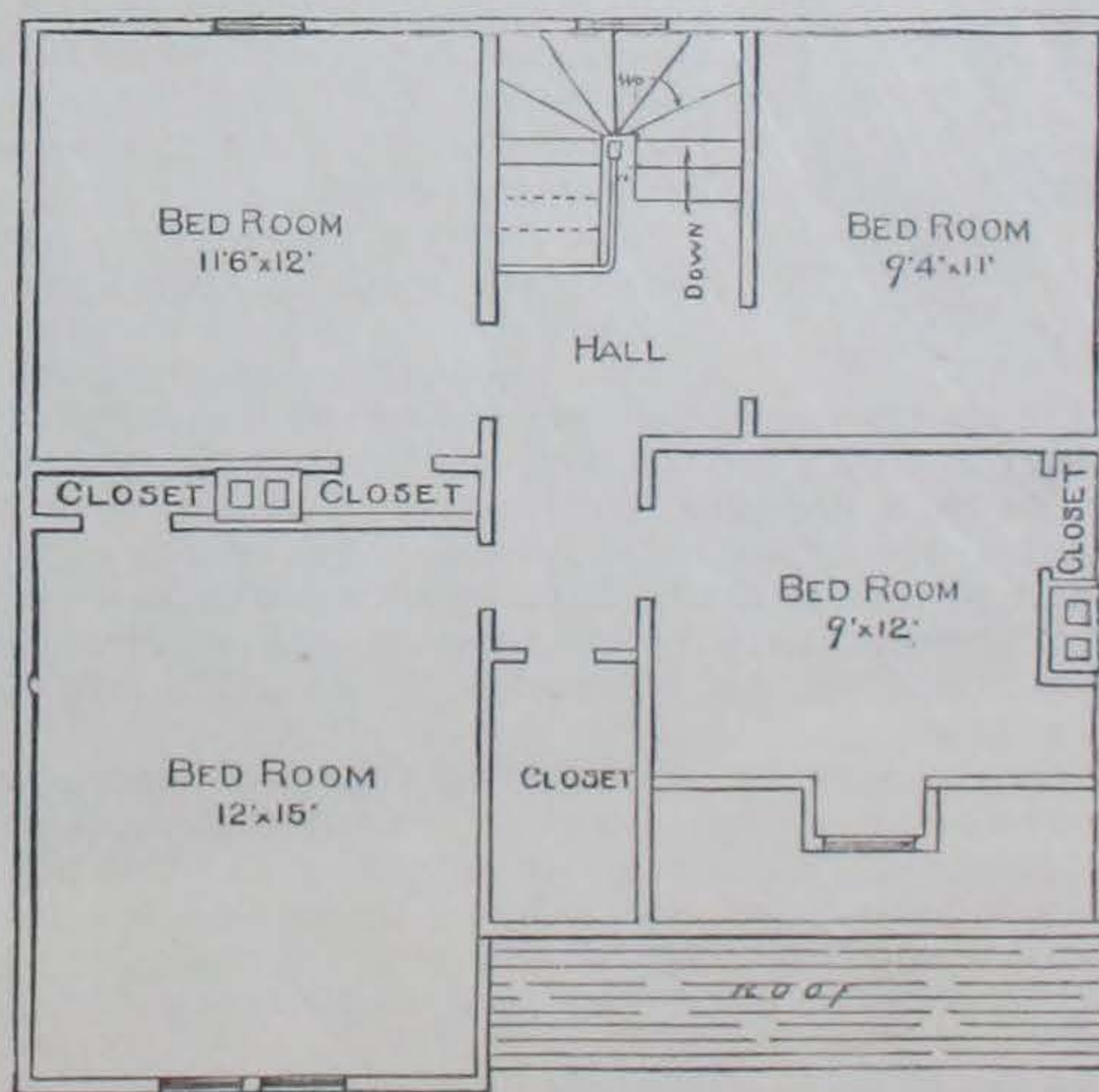
COST: \$1,875, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

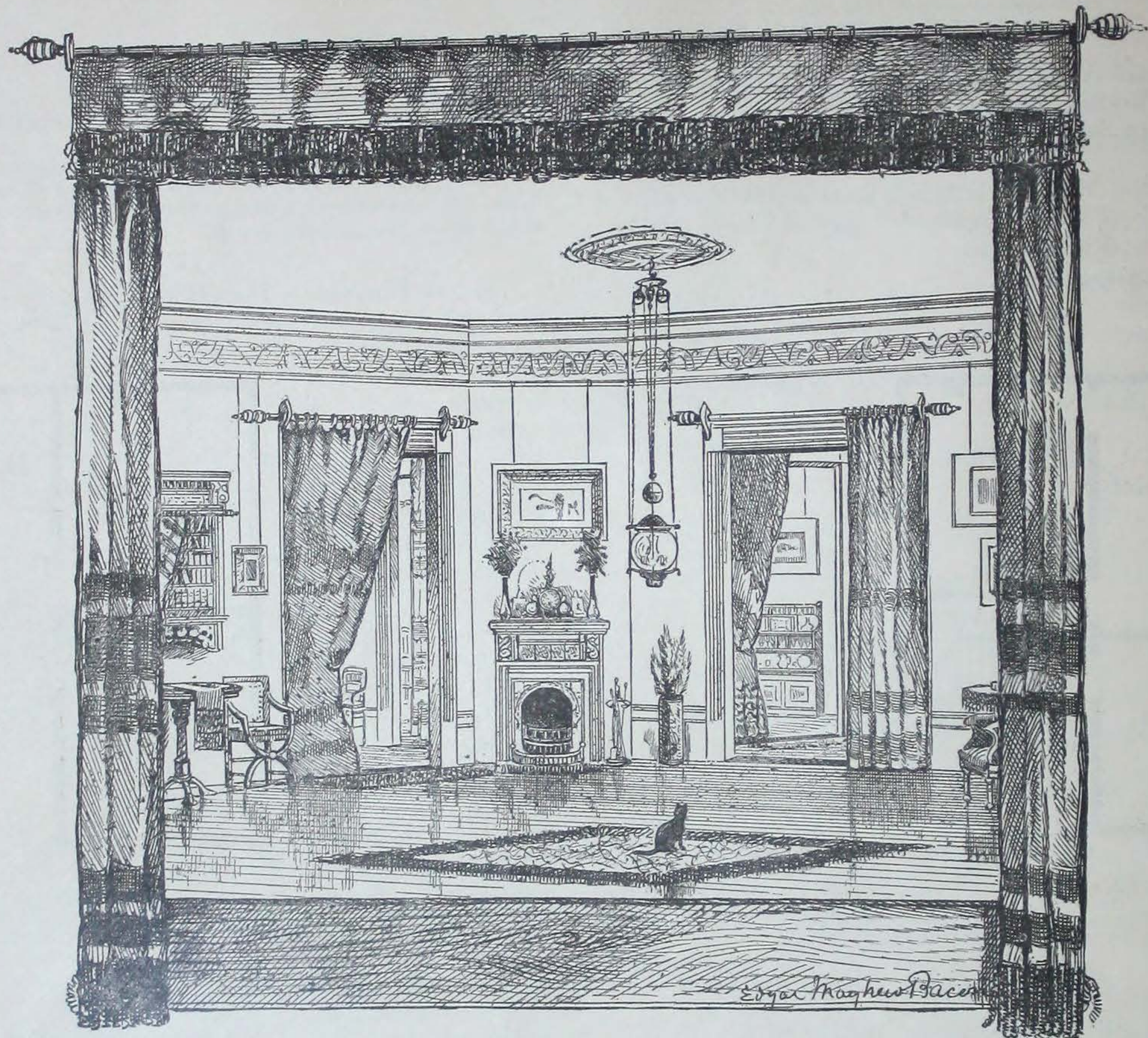
SPECIAL FEATURES.—The elevations are in the same style as the two preceding designs, and are not given here for want of space. The stairway is placed at the rear of the hall, which gives a free and roomy appearance to the front apartments. Cellar under the whole house.



FIRST FLOOR. NO. 189



SECOND FLOOR. NO. 189



VIEW OF AN INTERIOR WITH PORTIÈRES

A PLEA FOR PORTIÈRES



WITHIN a comparatively few years the portière has been working its way into popular notice and favor.

At first in public places, in lecture halls and theatres, the little curtains were found to be an improvement upon noisily swinging doors or treacherous screens; then their beauty and utility began to be appreciated in private houses, till at last they have won a recognized position in the household economy of thousands of home-loving people.

The day of the angular, hard and noisy door, with its unyielding habits and unfortunate trick of being always in the way, is nearly numbered, except for principal passageways. People are finding out that a portière does not get ajar and take one unexpectedly between the eyes at night; the portière does not slam with every sudden gust of wind and disturb every one within ear-shot as a cannon or a dynamite blast would; the portière is not liable to be left open when it should be closed and closed when it should be open by thoughtless children or careless domestics. It is noiseless, inexpensive, inviting, convenient, comfortable.

But many people will object that by the use of the portière one is subject to sudden draughts or unwelcome incursions. This is not the case, however. When properly hung a light curtain will admit air, yet exclude draughts, better than a door: with the door it is always a feast or a famine—either all draught or no air, but its softer substitute checks the direct current and admits only the pleasant coolness.

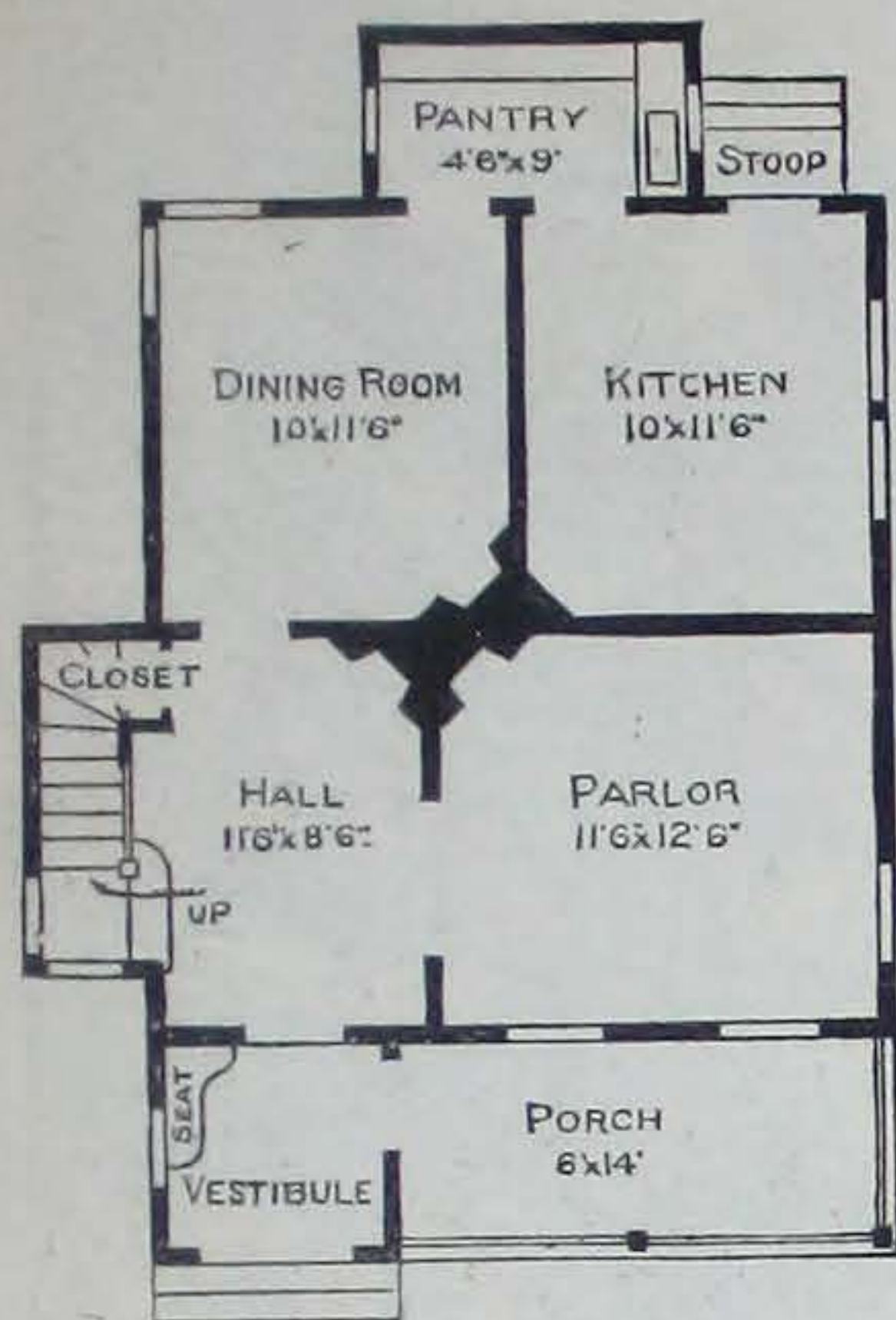
As we have already suggested, no one would dream of closing a hallway or entrance to a detached suite of rooms by a portière; propriety will dictate where it should be used. Between apartments

naturally connected, as between parlor and library, or nursery or alcove, for study or boudoir or music room, no other means of separation is so good because it separates without disconnecting.

In the old times, when one "living room" was superheated and the rest of the house left at an Arctic temperature, it was wise to have solid doors to seal an apartment hermetically. Now when the aim of modern heating appliances is to give an even temperature to the whole house, the old-time freezing hall and passages are things of the past and we no longer need tight fitting doors to inside rooms.

And now the question comes up, "how shall we hang our portières?" It is a query very quickly and easily answered. A rod of brass or wood or whatever material one cares to use is placed over the door and supported by brackets on each end. This is the first step. We do not insist upon the material of either rod or brackets, because that is always a matter for individual taste to settle. Along the rod are strung a number of loosely fitting rings, and from these rings depends the curtain, which may be of any suitable fabric. We have seen cretonne, heavy curtain stuff, Persian fabrics and decorated sail cloth in use, sometimes plain and unadorned and again covered with embroidery or ornaments of brass, old coins, Japanese figures, or any of the thousand and one fashionable adornments of the day. Sometimes one curtain is used, swinging across the entire length of the rod, and sometimes two, leaving the aperture in the middle. At the floor curtains should touch, but not drag.

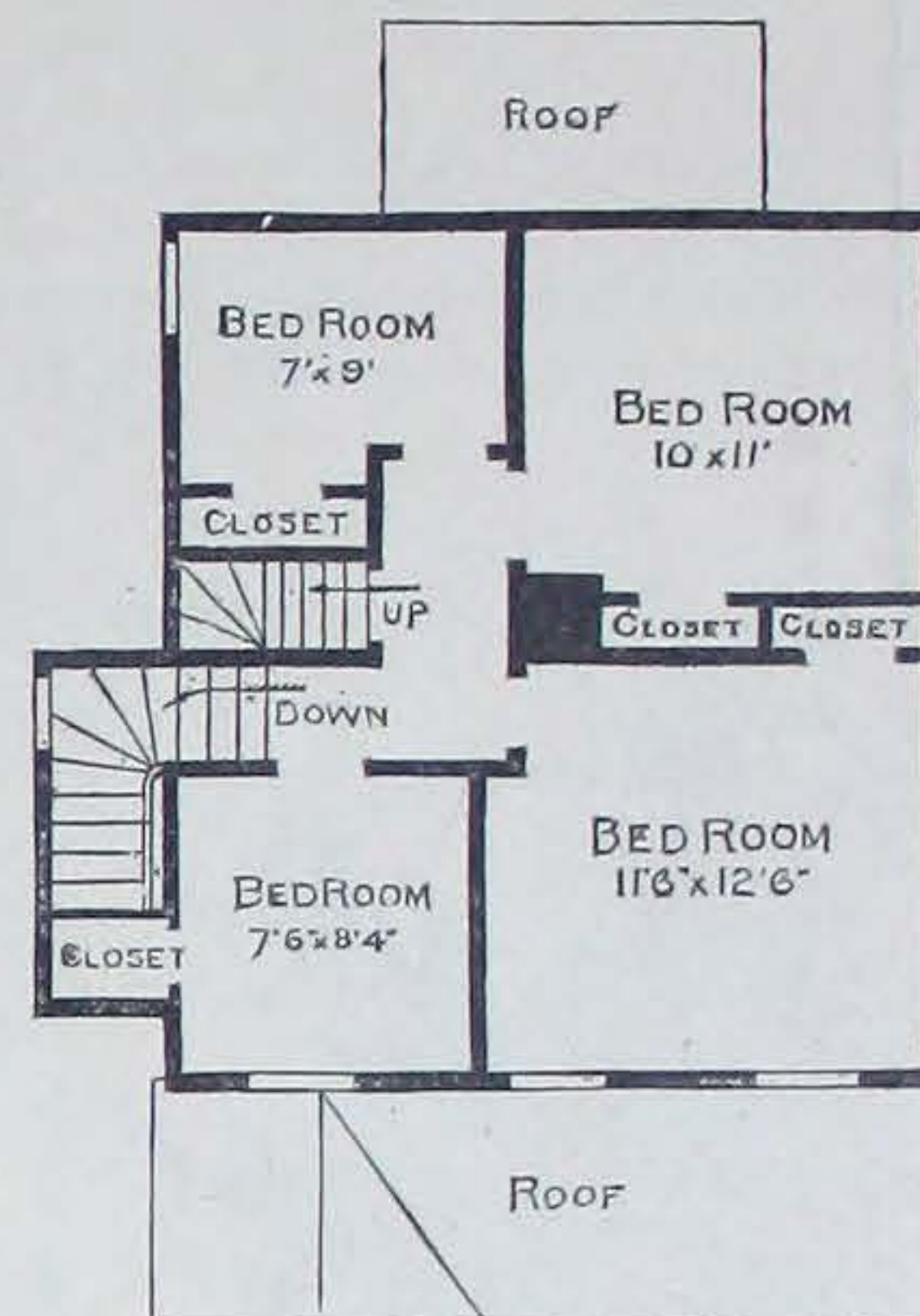
Æsthetically considered portières supply much needed color and beauty. They are, in themselves, highly decorative and if they had no other value this should commend them to people of taste and refinement. From an economical standpoint it is sufficient to say that they are cheaper than good doors—much cheaper if the ladies are left to manage it, as their knowledge of beautiful but inexpensive stuffs, their skill in lining thin materials, their good taste in adapting materials already on hand, brought forth from chests or store-rooms, not only secure economy, but give an individuality to the rooms which is invaluable.



FIRST FLOOR. NO. 190



DESIGN No. 190. FRONT ELEVATION



SECOND FLOOR. NO. 190

DESCRIPTION OF DESIGN NUMBER 190

SIZE OF STRUCTURE: Front, 21 ft., 6 in. Side, 35 ft., 6 in., including front veranda and pantry annex.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 8 ft., 8 in.; Second Story, 8 ft.

MATERIALS: Foundation, posts set in concrete or brick piers; First Story, clapboards; Second Story, clapboards and shingles; Gables, panelled; Roof, shingles.

COST: \$1,200, complete, except blinds.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.— One of the handsomest designs and most compact arrangement of rooms ever planned.

A large vestibule (with seat) protects the house from cold blasts. A beautiful hall, well lighted, and with a pretty fireplace, mantel and staircase, is connected with the parlor by a wide portiere, practically making the two apartments one large room. The kitchen is so arranged that cooking odors do not pervade the house, and communicates with the dining-room

through a large and convenient pantry, in which are shelves, drawers and the sink.

Four good bed-rooms and closets in the second story and a stairway to the attic story, where two rooms can be finished off at any time.

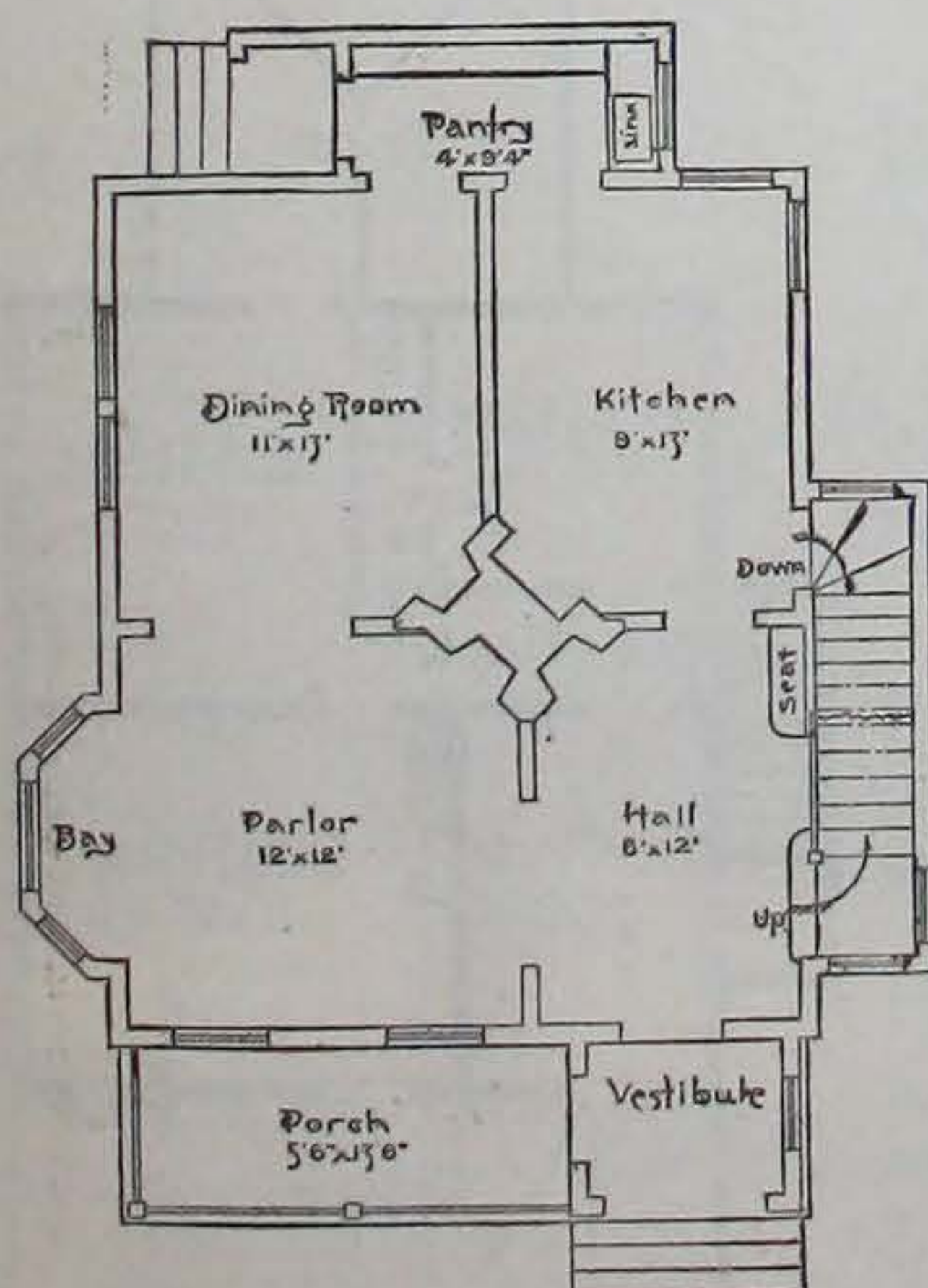
Our working drawings also show a cellar plan for parties who prefer a cellar, which can be built under the whole house at an additional cost of \$200. We furnish, also, a specification for the cellar and a bill of quantities giving in detail the additional material required.

This design has been built, from our plans, at many different places all over the country. When properly painted, it is, generally, the best looking house in the neighborhood, notwithstanding its moderate cost.

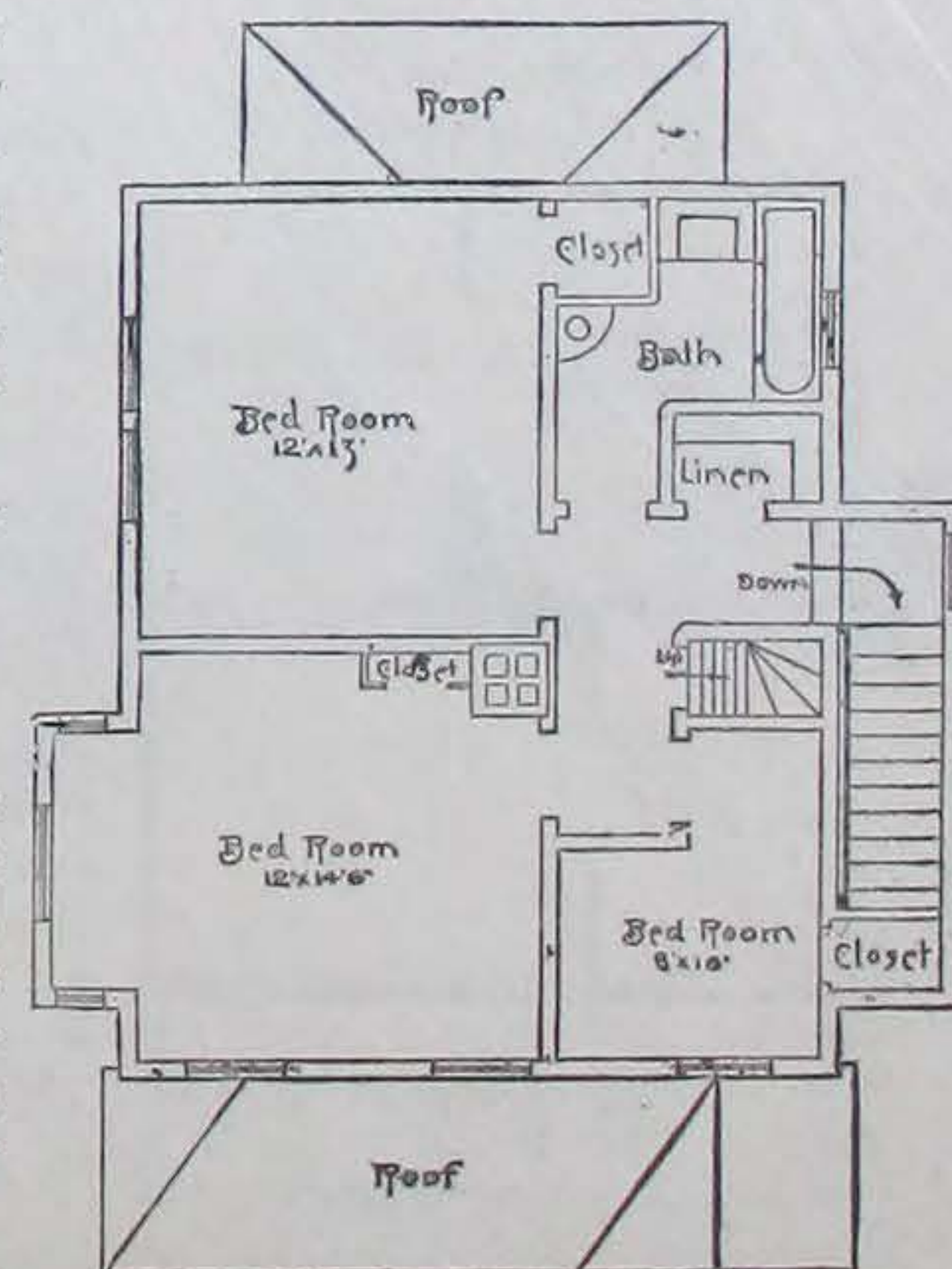
DESCRIPTION OF DESIGN NUMBER 191

Elevation in the same style as Number 190, and much like it in arrangement, but reversed and slightly enlarged. Has stone foundations, a bathroom, a cellar under the whole house, and fine bay-windows for both first and second stories.

COST: \$1,875, complete, except range and blinds.



FIRST FLOOR. NO. 191



SECOND FLCDR. NO. 191



DESIGN No. 192. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 192

SIZE OF STRUCTURE: Front, 21 ft., 6 in., not including the staircase annex. Side, 36 ft., 6 in., not including veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft.; First Story, 9 ft.; Second Story, 8 ft., 4 in.

MATERIALS: Foundation, posts set in concrete or brick piers; First Story, clapboards; Second Story, clapboards and shingles; Gables, shingles; Roof, shingles.

COST: \$1,500, complete, except grates and blinds.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—This design is an improvement of Number 190, having a kitchen extension, which enables us to connect all the rooms of the first floor by wide openings, producing an effect like that shown by the illustration of an interior and the use of portières on page 20. Throwing all of the rooms together by these wide openings practically makes one large apartment of the whole first floor, when desired. This gives an air of elegance and size to a small house that is astonishing. Double doors can be used in place of portières if preferred.

Our estimate includes neat hardwood mantels and fireplaces of pressed brick. Inside trim of clear

pine or white wood stained and very handsome in design. The staircase hardwood of unique design. Stained glass windows over the stair landing.

If a bath-room is required the small, rear bed-room can be converted into one.

Two rooms can be finished in the attic story, to which a stairway is provided.

Plenty of closets, and over the kitchen a good store-room is obtained.

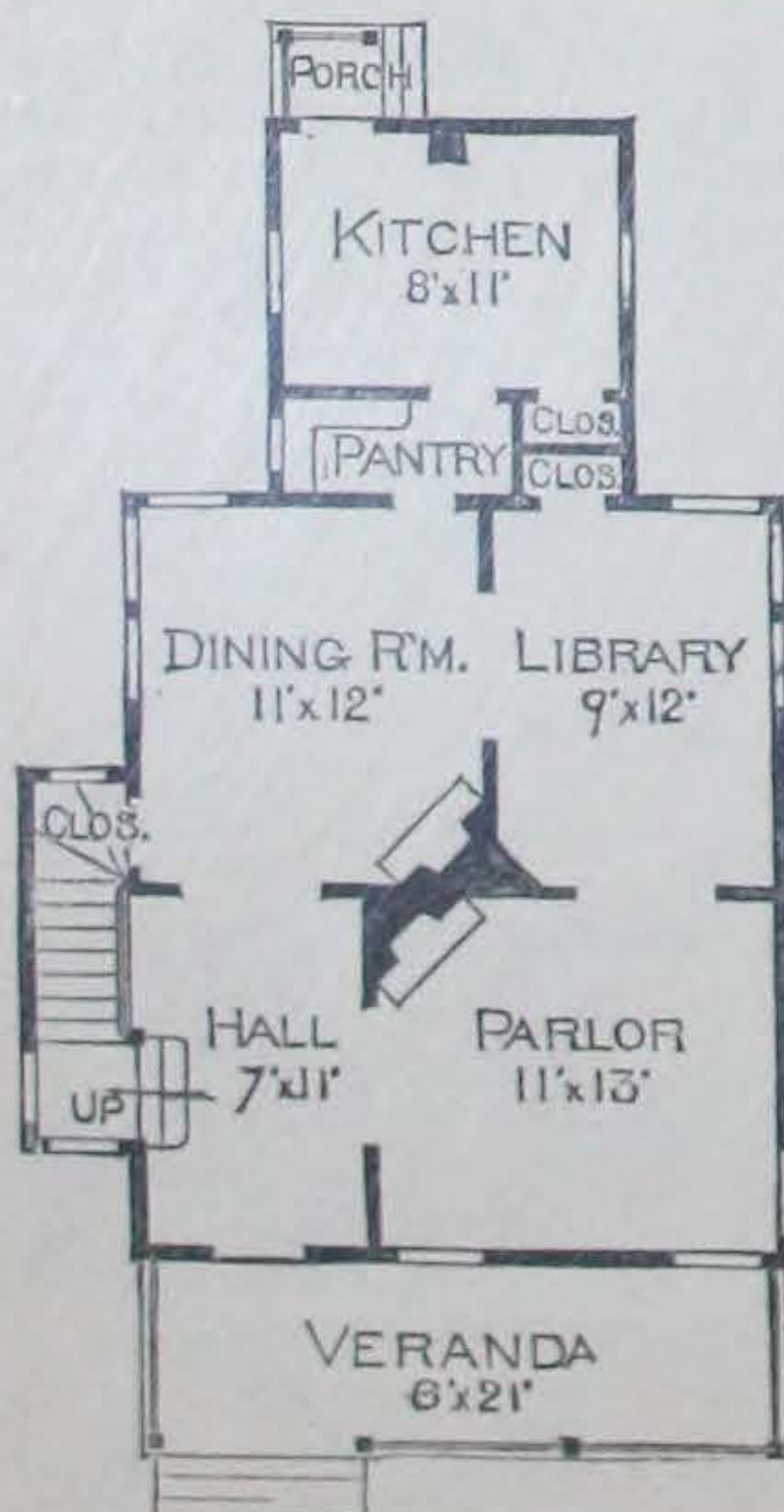
A Baltimore or fireplace heater placed in the parlor or dining-room warms two of the bed-rooms and hall above, and except in the most rigorous weather the other rooms will be comfortable.

There is a small cellar under the kitchen only. A cellar under the whole house, with stone or brick walls, costs \$150 additional.

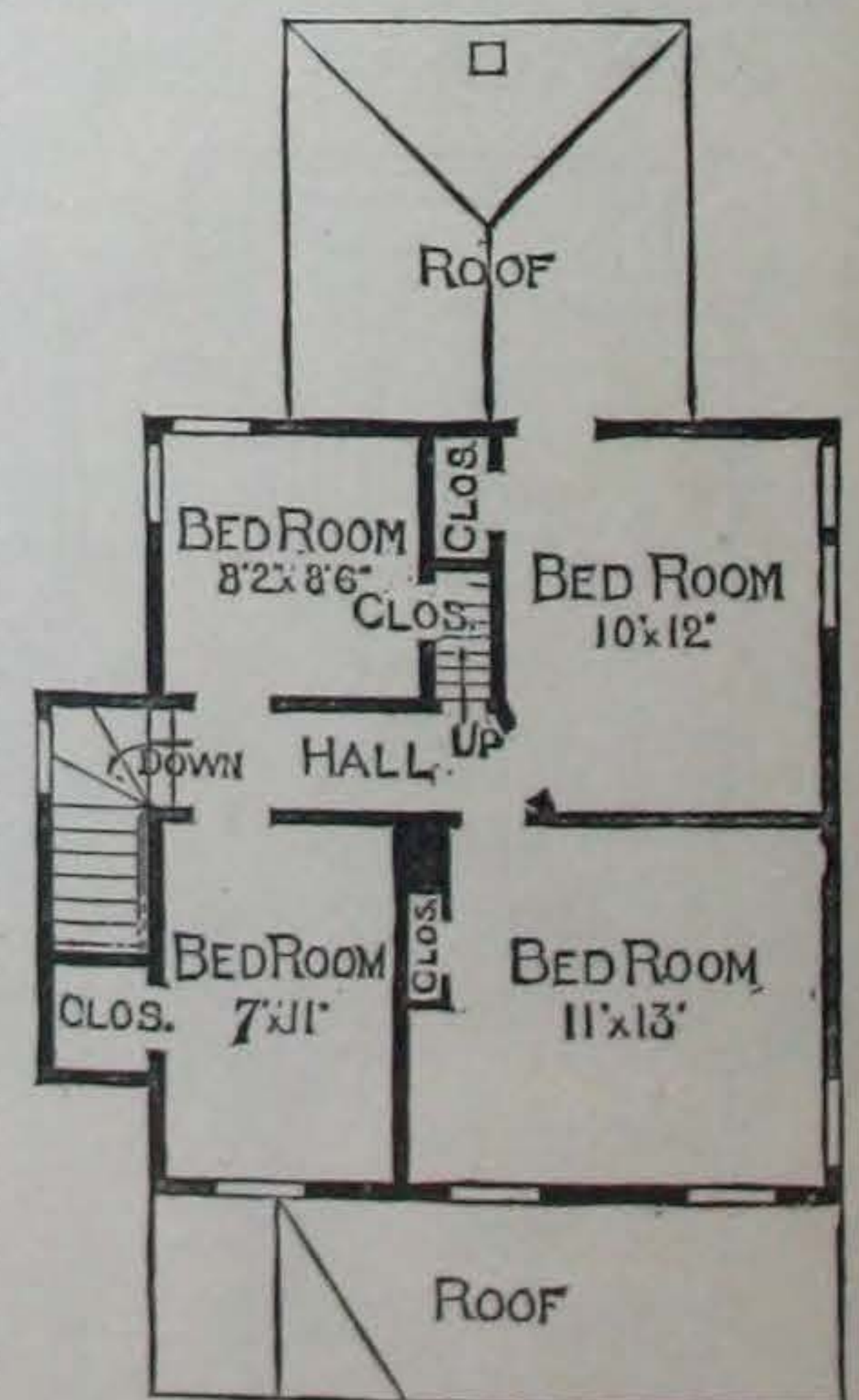
For a seaside cottage the veranda can be carried around the side.

If a bay-window is wanted it can be built in either the parlor or library at an additional expense of \$50. If a large dining-room is preferred, leave out the partition between the library and the dining-room, making it all dining-room, and build the fireplace straight instead of angular.

Painted in proper colors (which are described in our specifications) this makes a very attractive and striking house. Its appearance always suggests that it is a larger and more expensive house than it really is.



FIRST FLOOR. NO. 192



SECOND FLOOR. NO. 192

DESCRIPTION OF DESIGN NUMBER 193

SIZE OF STRUCTURE: Front, 23 ft., 6 in. Side, 41 ft., including veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft.; Third Story, open attic.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, clapboards and shingles; Roof, shingles.

COST: \$1,850, complete, except grates or heaters.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different time also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution

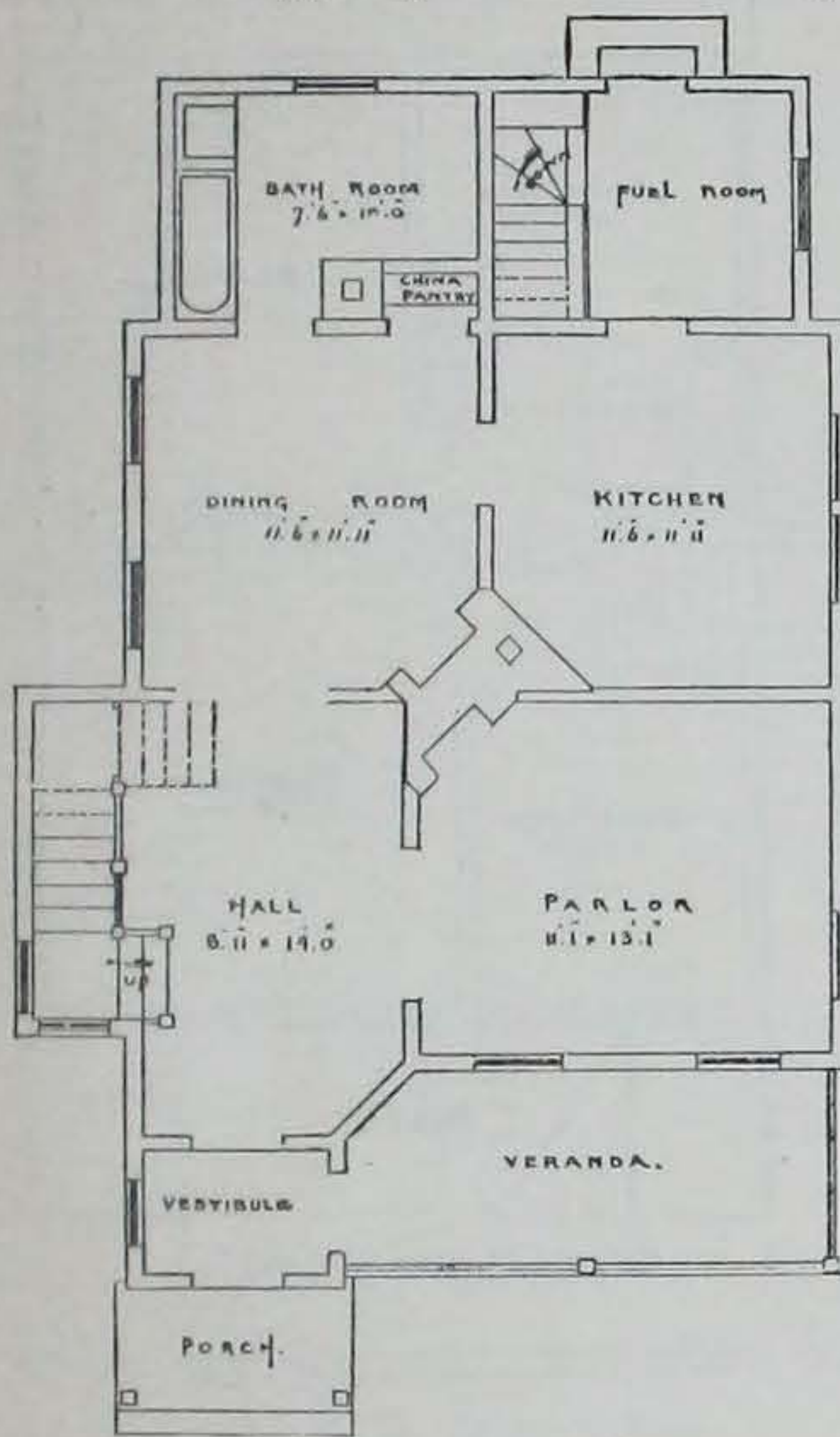
are given in our Specifications. It is impossible to give them here, as it would require many pages of this book.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

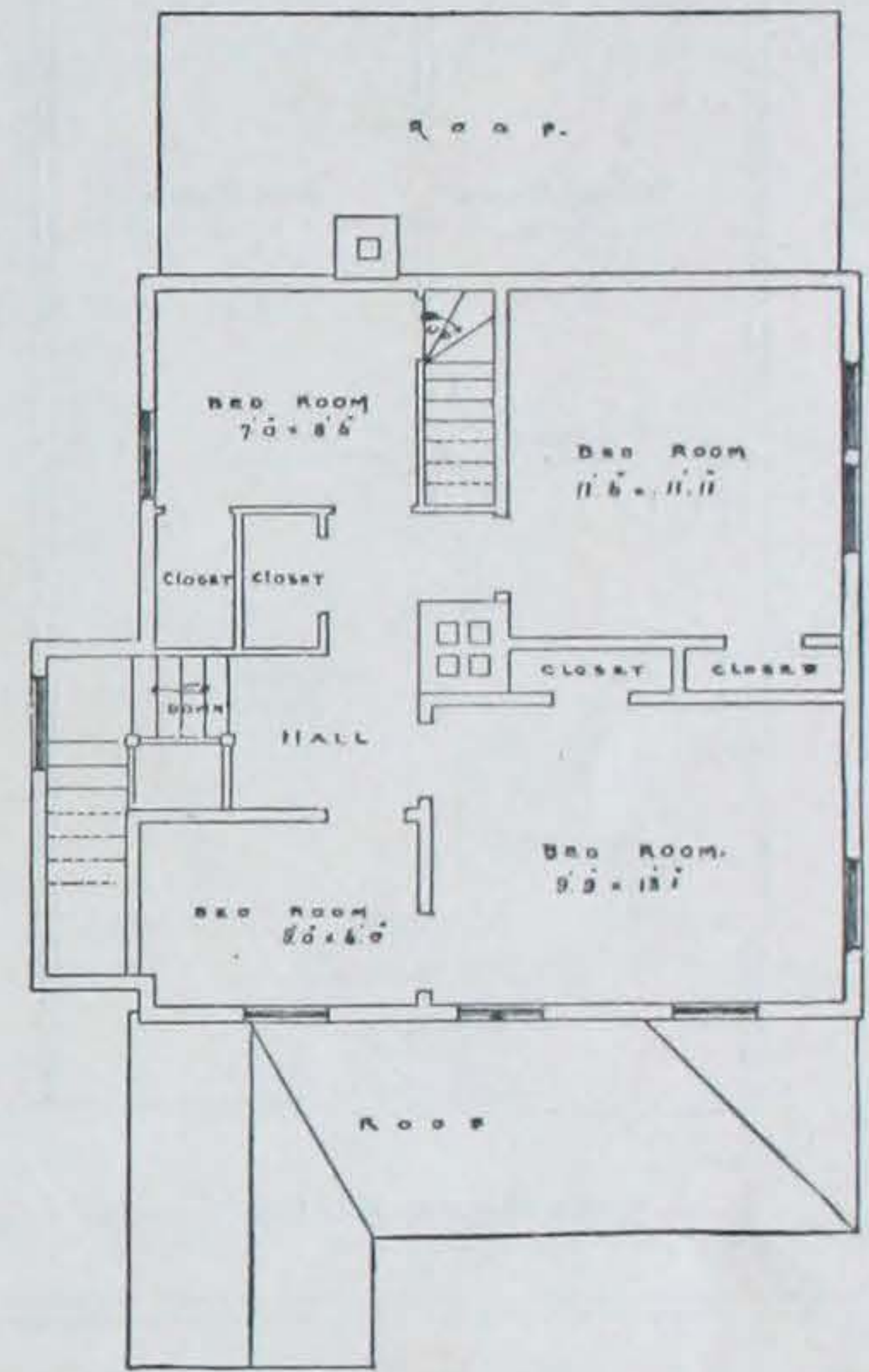
SPECIAL FEATURES.—These plans are enlarged modifications of the favorite Design Number 192, preceding, and the exterior is in the same style. Cellar under the whole house.

To reduce cost, employ piers or posts for foundations, use plaster board for inside walls, reduce size of cellar or have none at all, or employ any of the other economies of construction suggested on other pages.

If preferred, the bath-room can be placed in the second story, the space thus vacated, with a little addition, would make a fine kitchen, and thus relieve the main floor. In very severe climates, however, it is just as well to retain the kitchen where it is, as it helps to warm the house. Warmth is essential, and the odor of a good dinner in preparation is not very objectionable in zero weather.



FIRST FLOOR. NO. 193



SECOND FLOOR. NO. 193

DESCRIPTION OF DESIGN NUMBER 194

SIZE OF STRUCTURE: Front, 23 ft., 8 in., exclusive of hall annex. Side, 45 ft., 2 in., inclusive of veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft.; Second Story, 8 ft., 6 in.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, clapboards and shingles; Gables, panelled; Roof, shingled.

COST: \$2,100, complete, except furnace.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—This is another modification of Design Number 192, the plans being similar and the exterior in the same style.

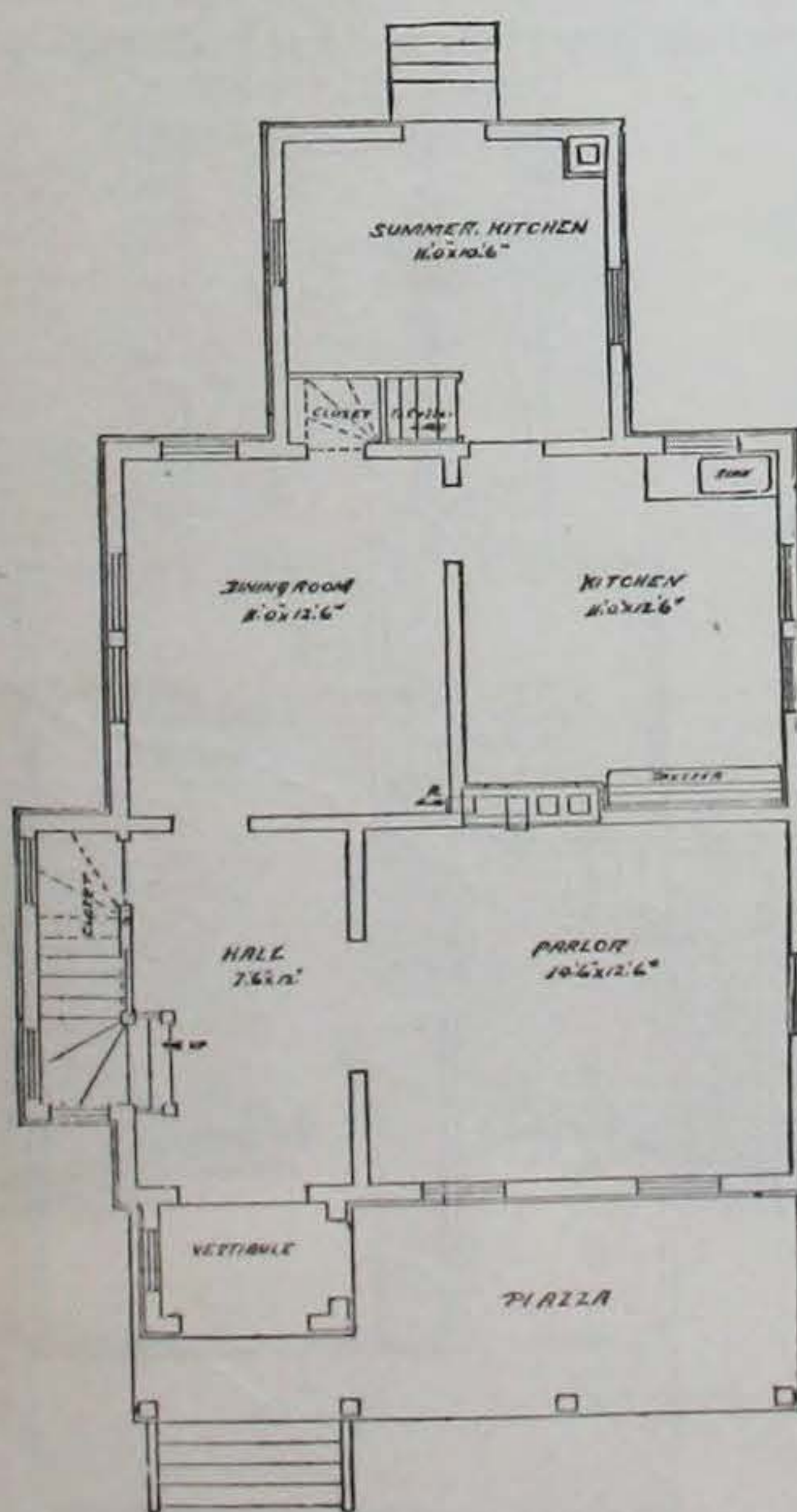
It is designed to heat this house with furnace, and plans are made accordingly.

Summer kitchen can be used as a wash-room and wood shed.

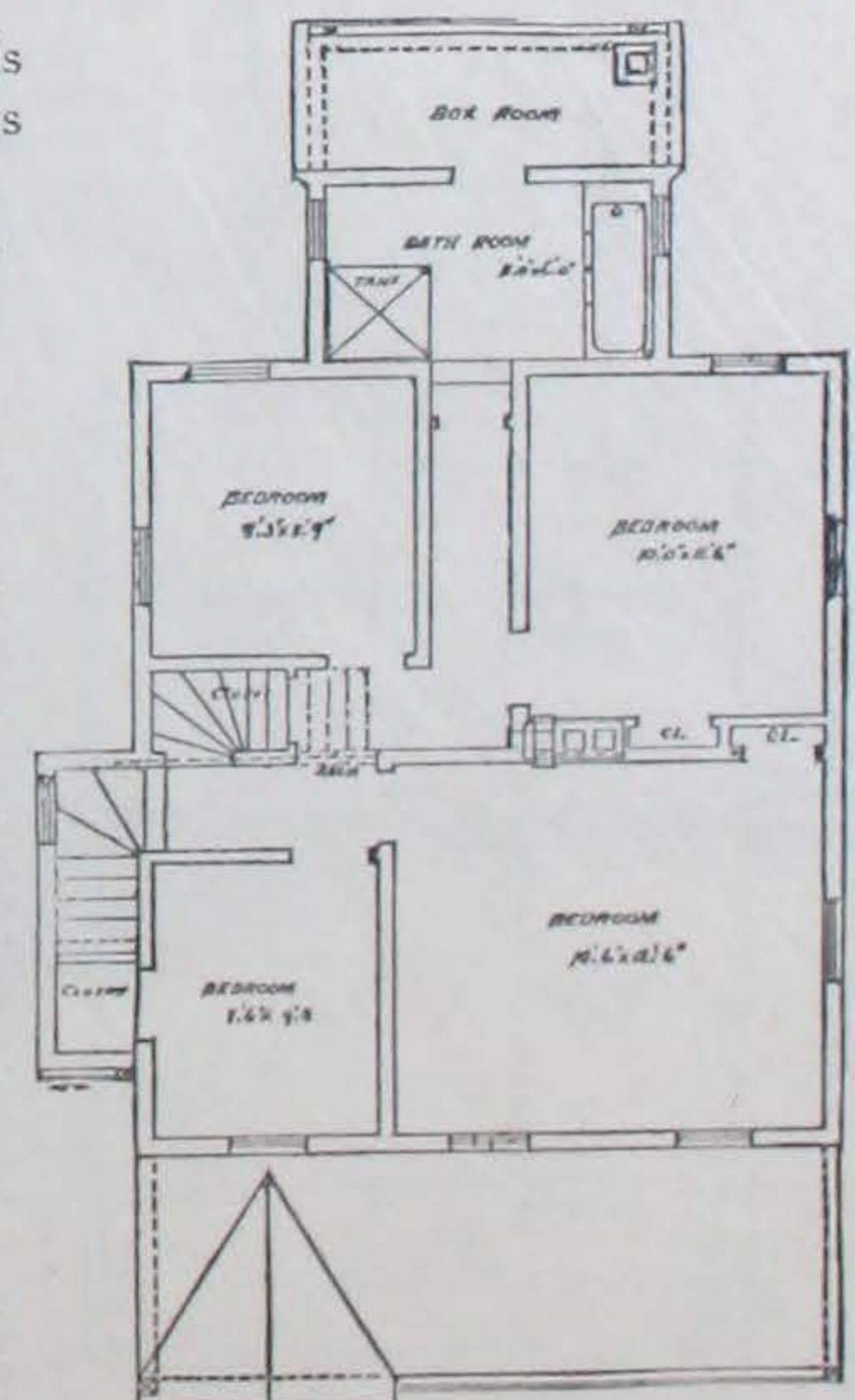
Cellar under the whole house.

One of the popular features of this series of designs (Number 192 and modifications) is the side projection. It is inexpensive, and admirably serves its special purpose—that of providing a place for the stairway, leaving the hall clear and unobstructed. The exterior appearance is very pretty also; it breaks the monotony of the side. The shingled sides afford an opportunity for a contrast of colors in painting.

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FIRST FLOOR. NO. 194



SECOND FLOOR. NO. 194

SHOPPELL'S MODERN HOUSES

DESCRIPTION OF DESIGN NUMBER 195

SIZE OF STRUCTURE: Front, 24 ft., exclusive of hall annex.
Side, 51 ft., 6 in., including veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 8 ft., 6 in.; Second Story, 8 ft.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, clapboards and shingles; Roof, shingles.

COST: \$2,075, complete, except grates.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

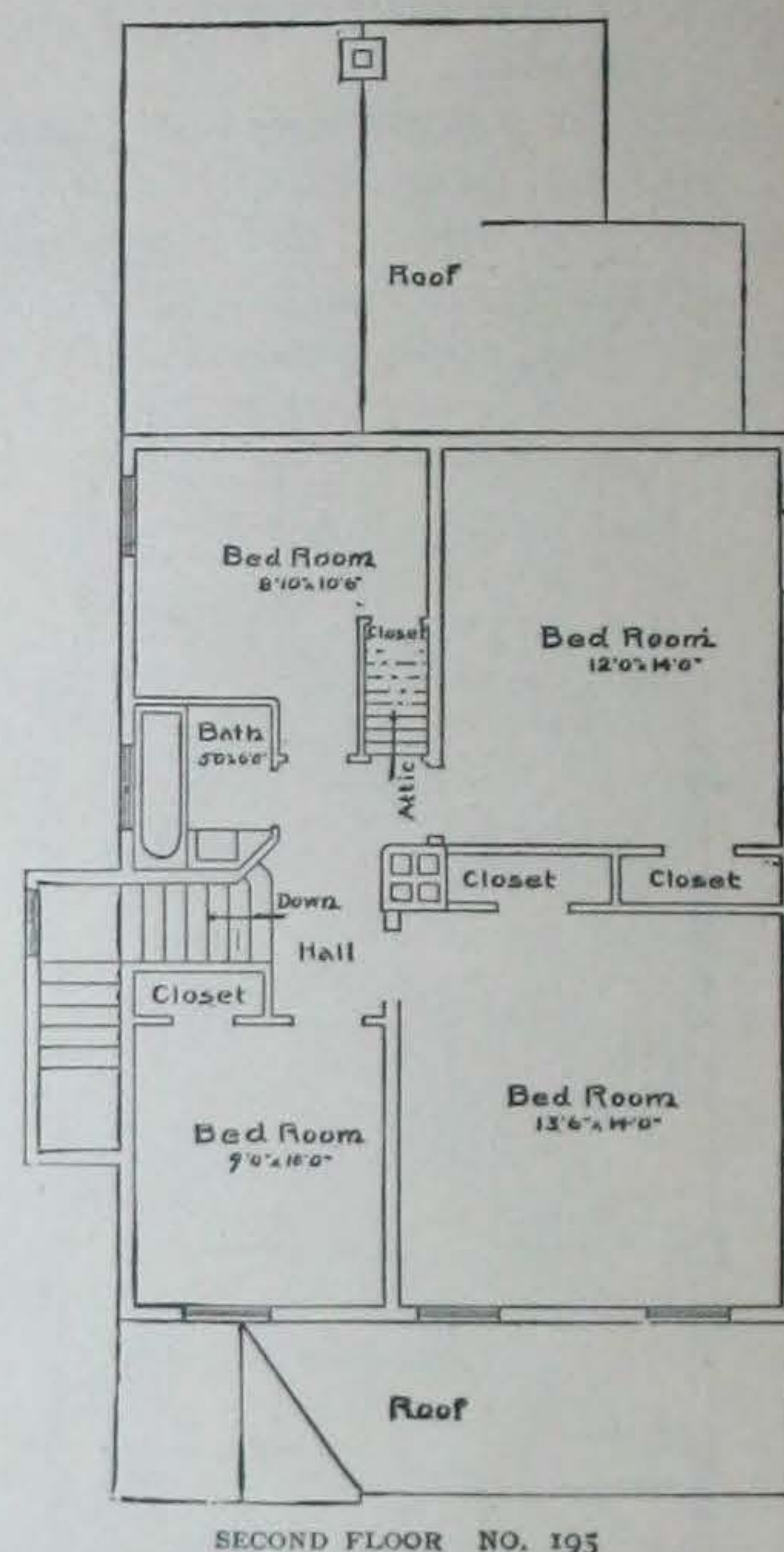
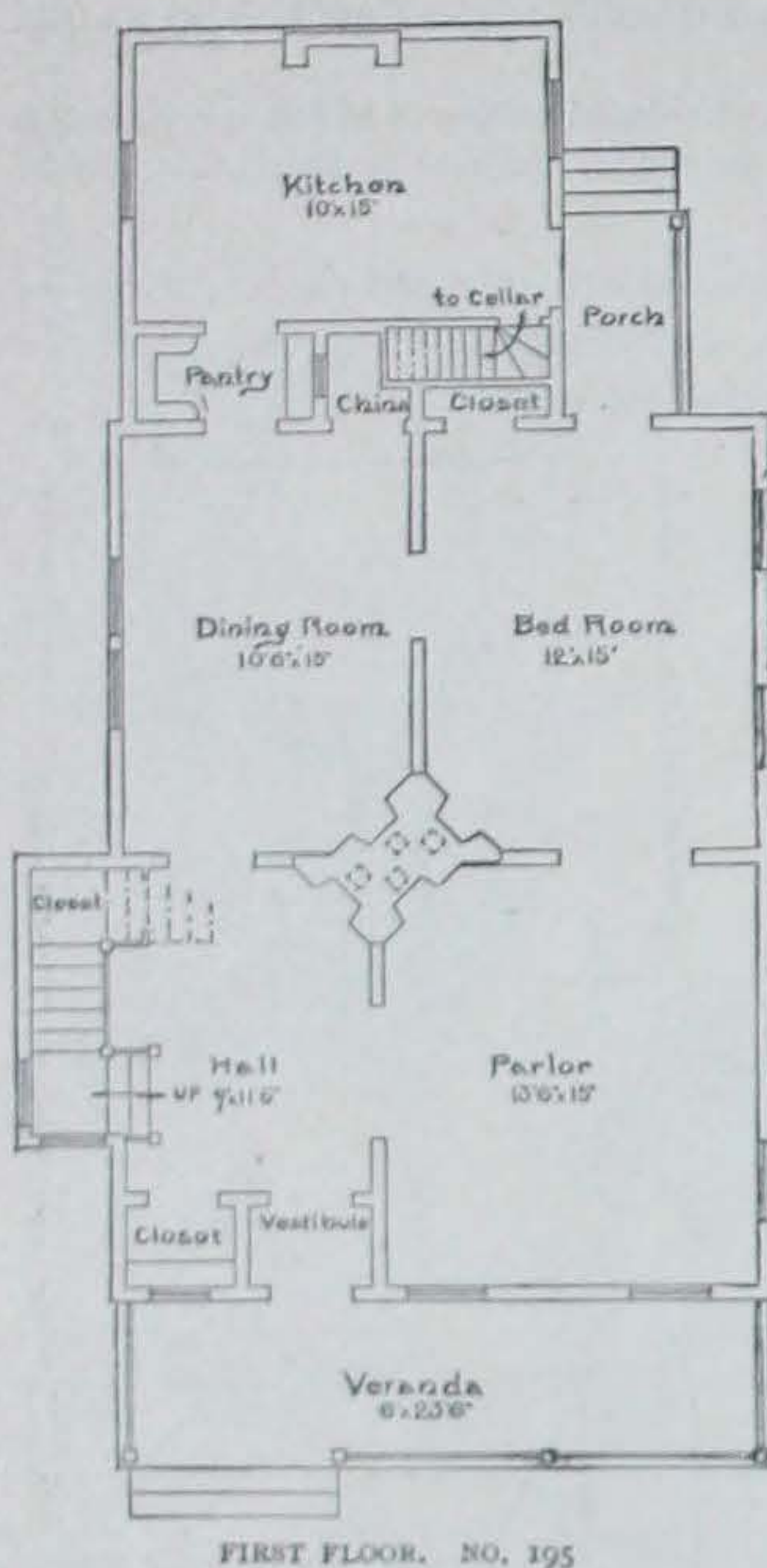
Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Exterior in same style as Number 192.

Cellar under kitchen, dining-room and bed-room.

This is a very complete house, having a vestibule, hall closet, four fireplaces, china closet, pantry, inside cellar stairs, back porch, closets to every room and a bath-room.



DESCRIPTION OF DESIGN NUMBER 196

SIZE OF STRUCTURE: Front, 22 ft., 6 in., exclusive of hall annex.
Side, 48 ft., including veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft., 6 in.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, clapboards and shingles; Roof, shingles.

COST: \$2,100, complete, except grates or heaters.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—This is another modification of design Number 192.

Has a fine wash-room, and a cellar under half of the house.

A rear porch enclosed with lattice, and an earth closet.

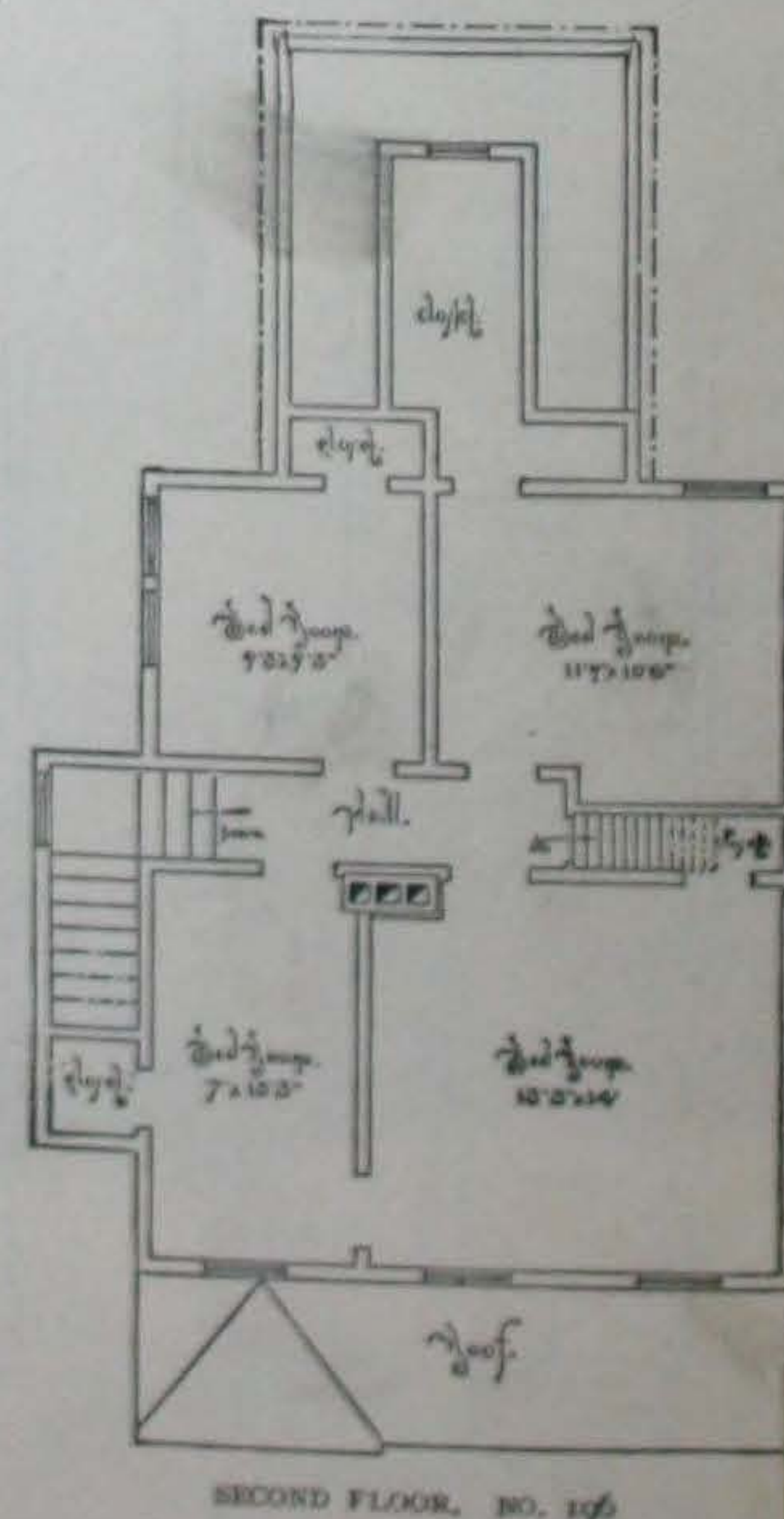
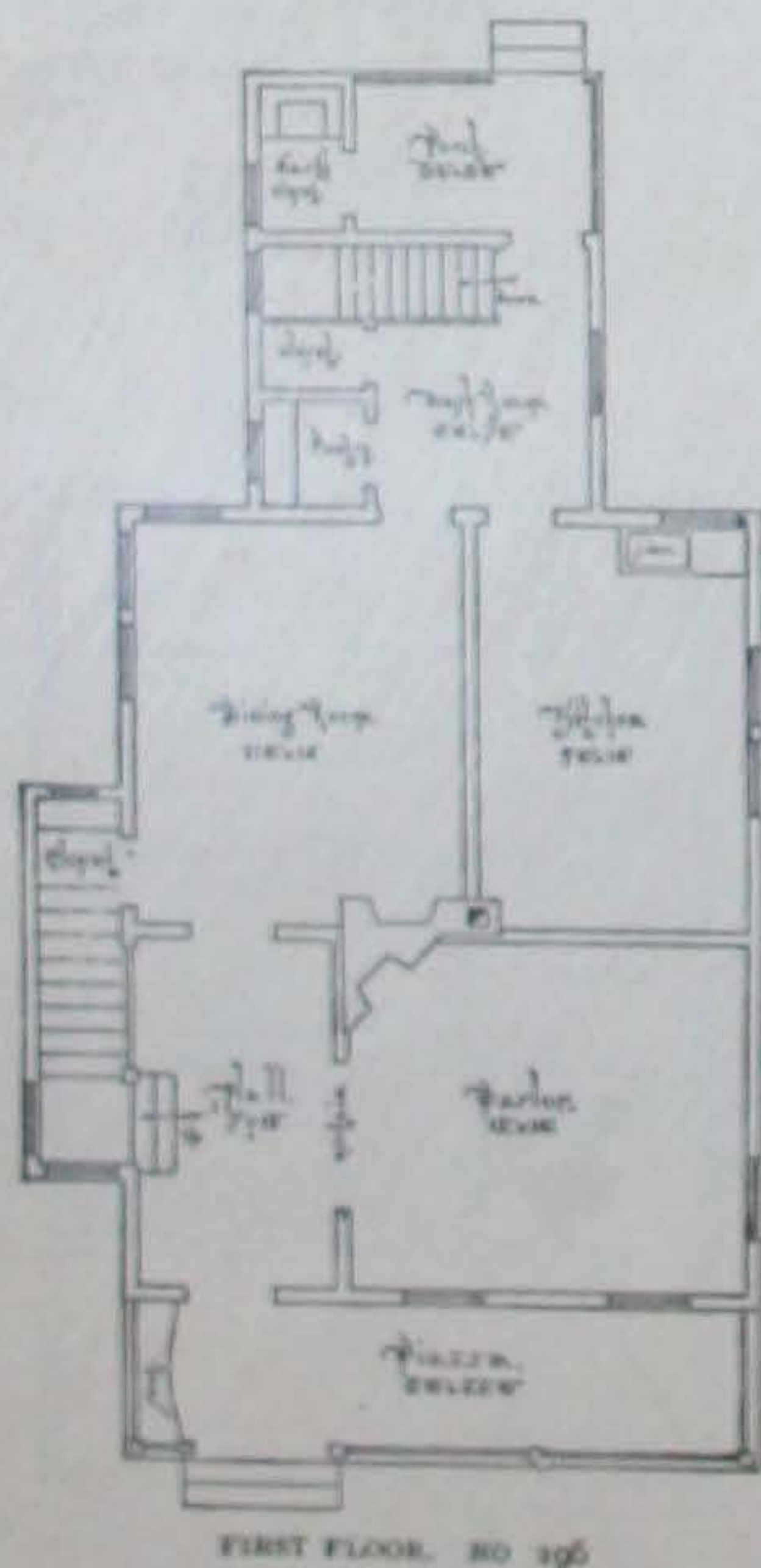
A fine, large china closet under the stairs for the dining-room.

In this series of plans the location of the chimney in the middle is a good feature. It saves all of the heat for the house in winter.

Open fireplaces cannot be recommended too strongly. From the earliest times down to the present day their use has been highly

satisfactory; now when sanitary precautions and artistic effects are considered of great importance, we find that the fireplace affords the best ventilation and its living flame gives a touch of beauty to an interior that nothing else supplies. The best grates, set well forward, will thoroughly heat rooms of the sizes shown on the plans of this design, except in the very coldest weather. For very large rooms they are not sufficient (except in the mildest climates), and furnaces or other methods of heating should be employed in addition.

In regard to heating and ventilating, however, it is well to keep thoroughly posted as to the latest devices. Thousands of experienced and inventive men are working on the problem and some improved methods can be fairly expected.



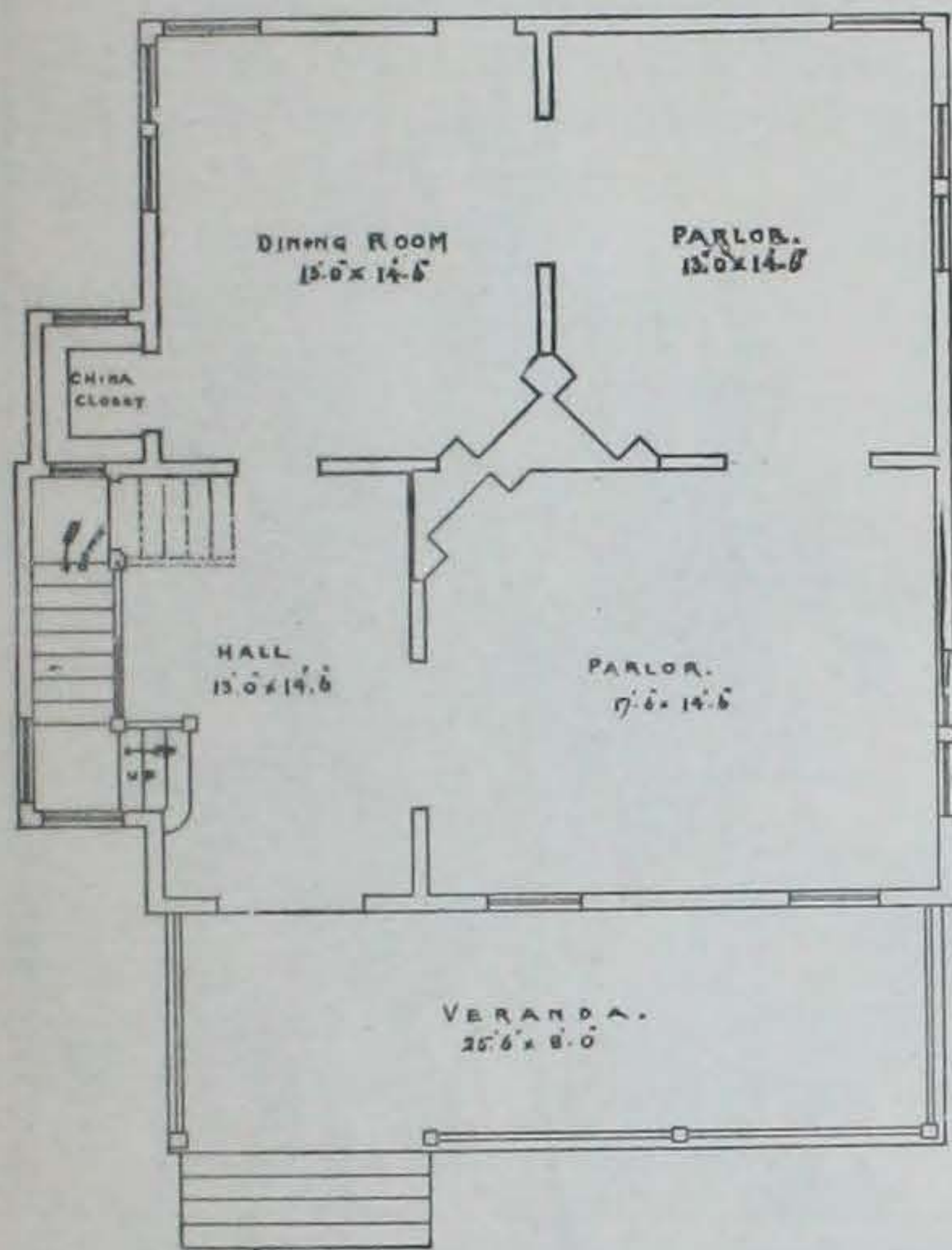
DESCRIPTION OF DESIGN NUMBER 197

SIZE OF STRUCTURE: Front, 28 ft., exclusive of hall annex. Side, 39 ft., including veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 10 ft., 6 in.; Second Story, 9 ft.; Third Story, unfinished.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, clapboards and shingles. Roof, shingles.



FIRST FLOOR. NO. 197

COST: \$2,575, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables,

Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

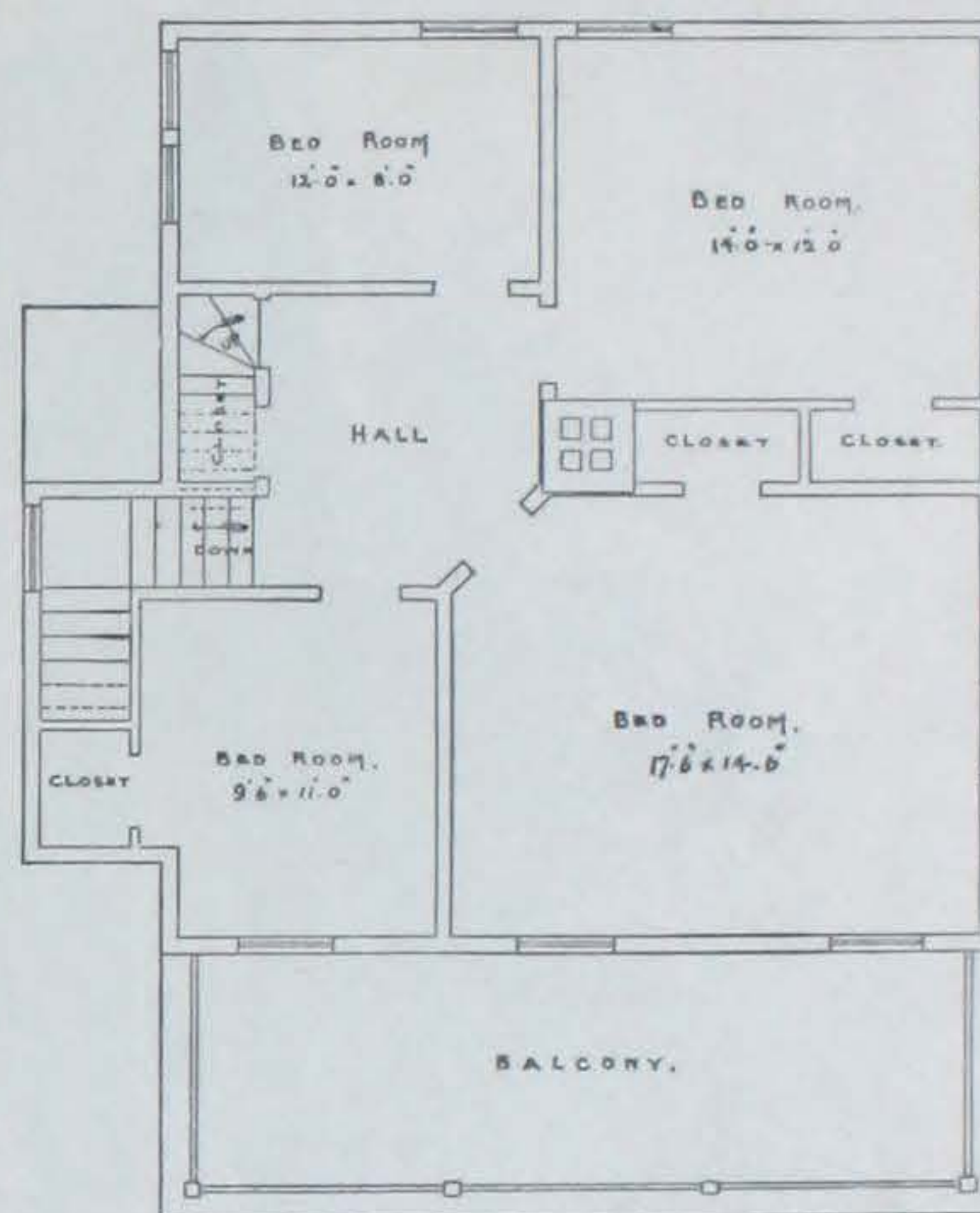
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—This is another modification of the favorite design, Number 192. The exterior is in the same style.

Designed for the South, it has large rooms, high ceilings, open fireplaces, and a large balcony over the veranda. The kitchen is in a detached building in the rear, according to the custom in the South. There is a cellar under the whole house, fine closets and plenty of room.

We can furnish plans for foundation of brick or stone piers or posts, also without cellar, which materially reduce cost.

Where an attached kitchen is wanted, a small one-story lean-to can be added at the rear.



SECOND FLOOR. NO. 197

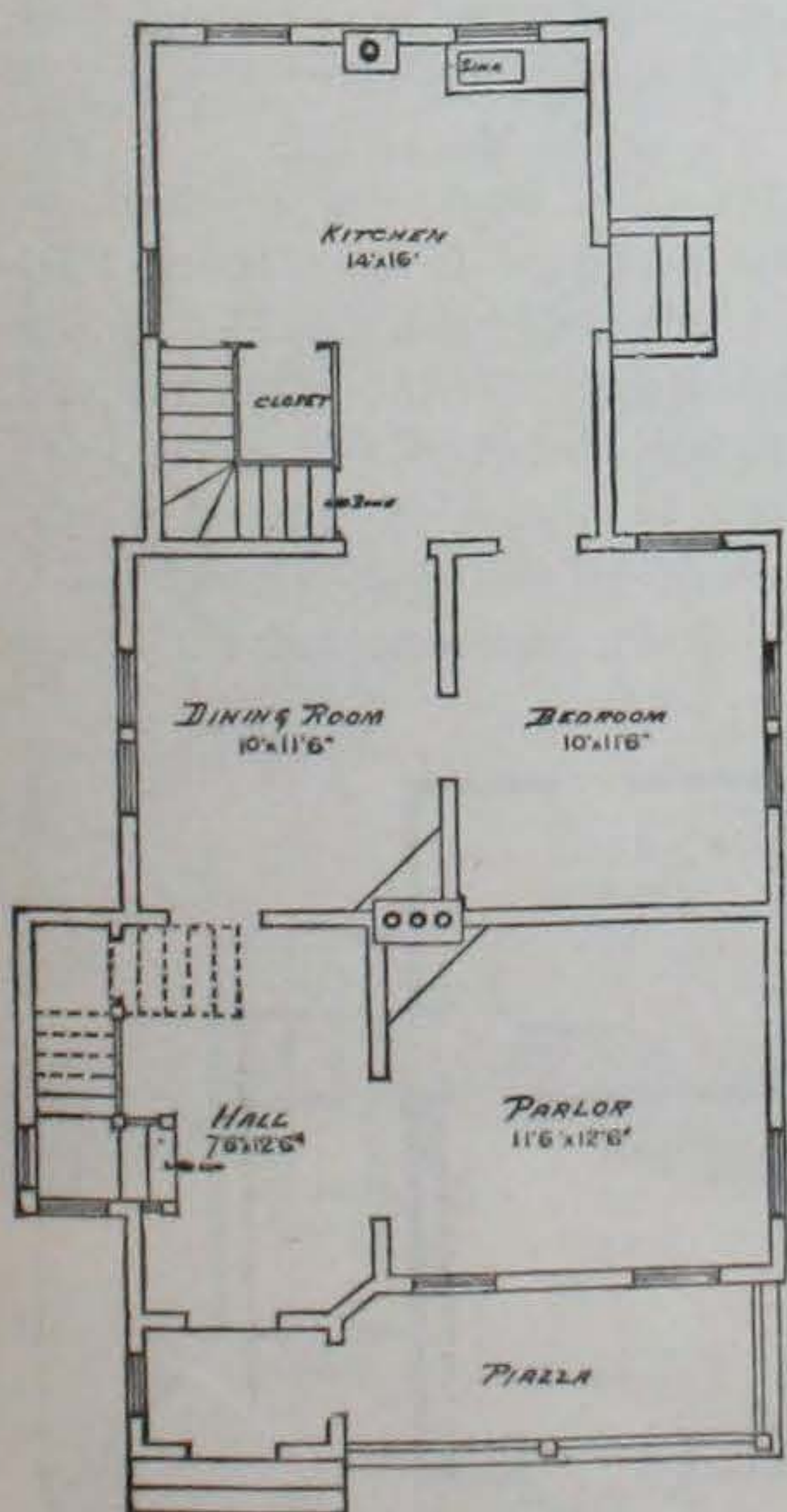
DESCRIPTION OF DESIGN NUMBER 198

SIZE OF STRUCTURE: Front, 21 ft., 6 in.; exclusive of hall annex. Side, 47 ft., including veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft. Second Story, 8 ft., 6 in.; Third Story, unfinished.

MATERIALS: Foundation, brick and stone; First Story, clapboards; Second Story, clapboards and shingles; Gables, panelled; Roof, shingles.



FIRST FLOOR. NO. 198

COST: \$1,950, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

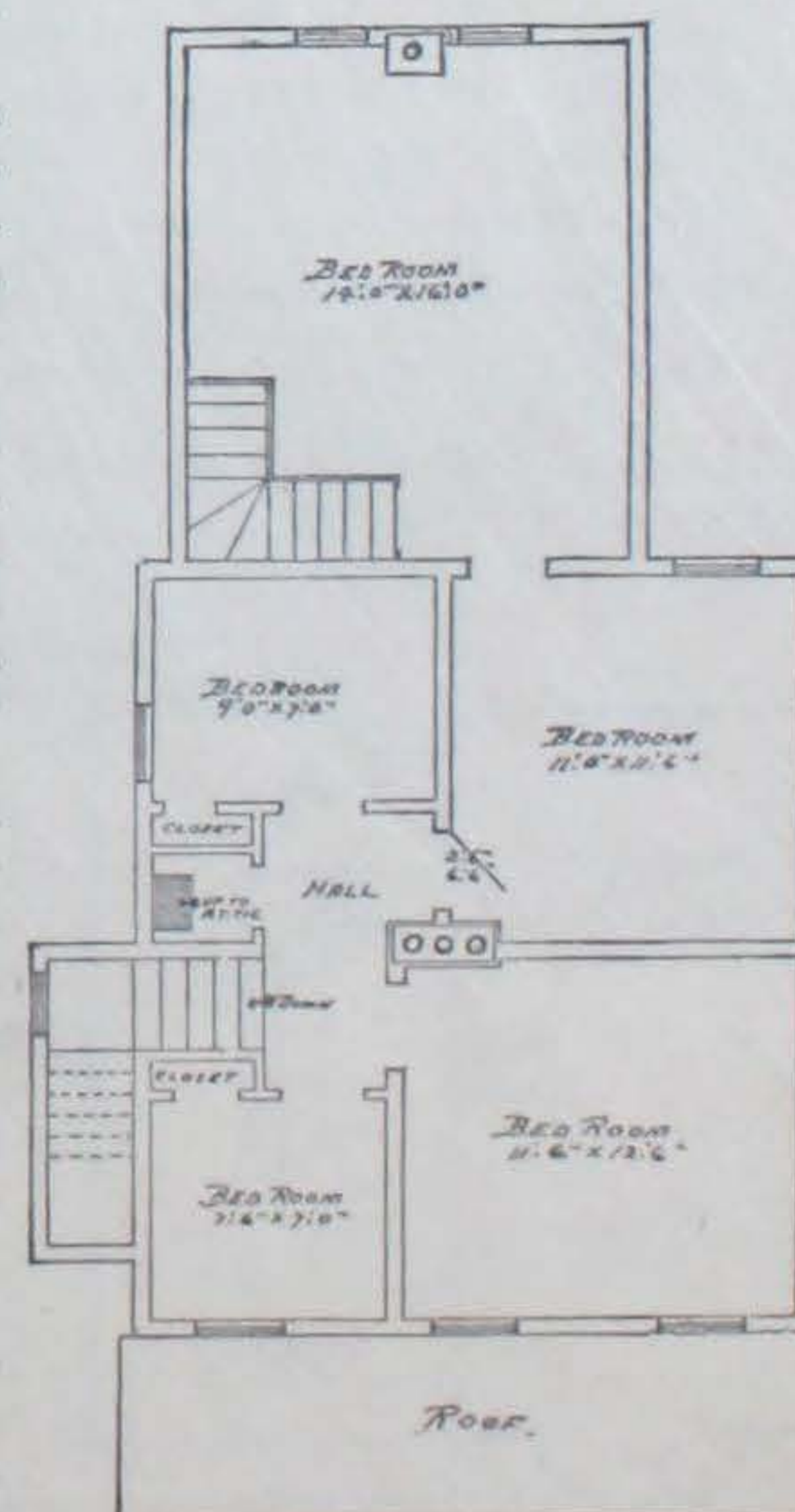
Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—This is still another modification of Number 192, the exterior being in the same style and the arrangement of rooms similar. This kitchen extension has two stories. Cellar under the whole house and a back stairway. Stoves or a furnace to be used for heating.

This and the preceding series of designs (Number 192 and its modifications) are strongly recommended. The accommodations and conveniences they afford and the fine appearance they make, surprise and please all who build them. The costs given are correct, having been proved over and over again. As pertinent to this important matter of costs, and as illustrating the reliability of our figures, we give below an extract from a recent letter from a gentleman who built this house (Number 198) in Central New York State: "The actual cost of house you furnished plans and specifications for was \$1,475, by day's work. I did not build the areas,* as called for in the plans, and I do not include the cost of plans. The house is very satisfactory, and is liked very much by everybody."

* Small excavations bricked up around cellar windows an expense of only \$21.



SECOND FLOOR. NO. 198



DESIGN No. 199. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 199

SIZE OF STRUCTURE: Front, 31 ft., 6 in. Side, 30 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft., 2 in.; Second Story, 9 ft.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Roof, shingles.

COST: \$1,750, complete, except kitchen range.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—This is a capital house for a seaside or summer resort, where meals can be procured from a hotel, thus doing away with the necessity for a kitchen and cellar, and avoiding the most troublesome part of housekeeping. Without kitchen and cellar (which are included in our estimate, however), and set on posts or brick piers, there is a large reduction in cost. It is a good Southern house, also, where no cellar is wanted, and the kitchen is detached.

This is a good design for any climate, however, and for a permanent residence. It is very showy, has plenty of light and air and a fine, wide veranda.

There is a charming alcove in the front bed-room; also a stairway to the attic, where three rooms can be obtained, if wanted.

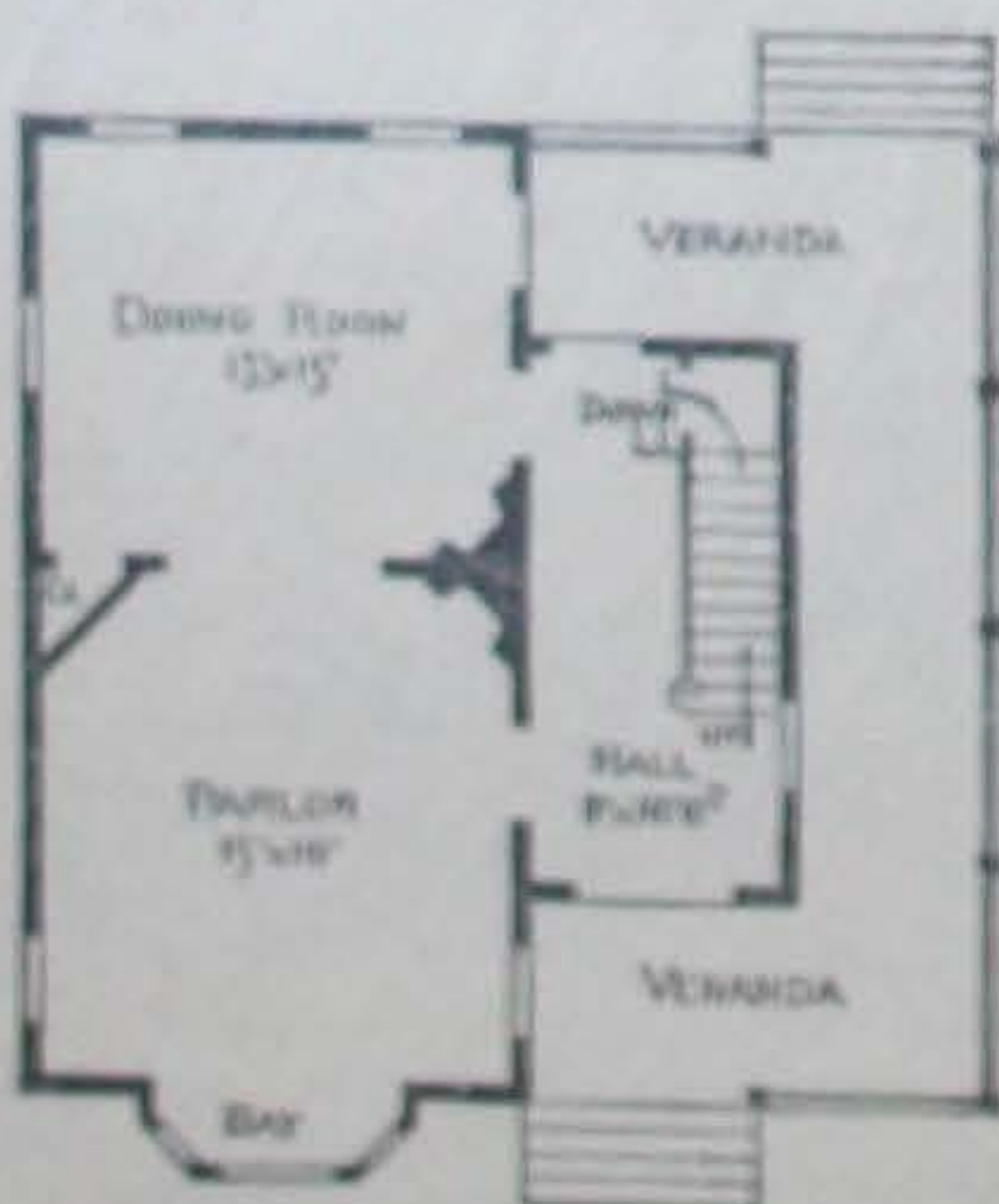
Our plans and specifications call for a kitchen and cellar in the basement, which can be modified, however, as suggested above, or according to a plan shown on the next page.

A showy house like this always rents well.

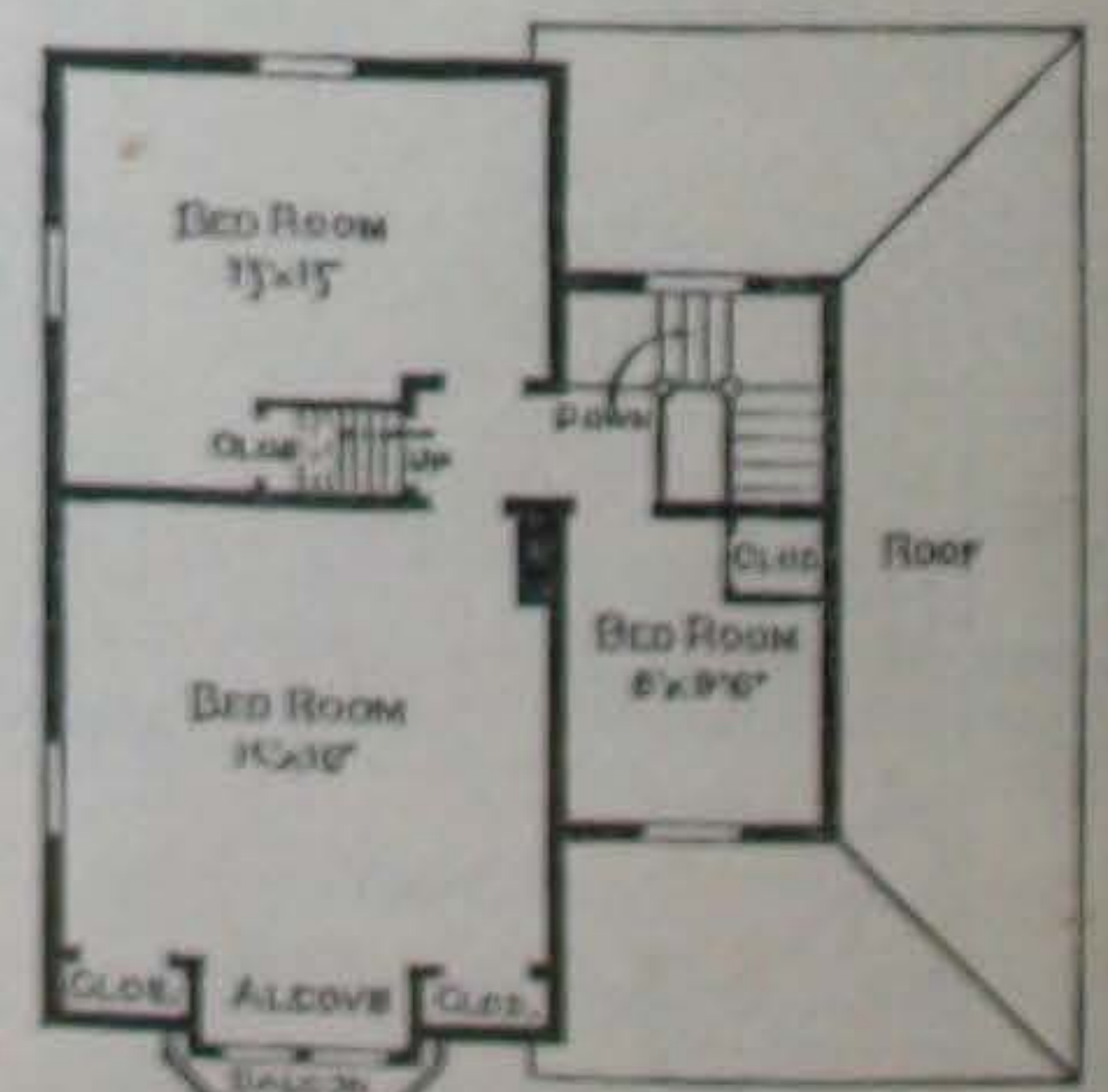
NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.



FIRST FLOOR. NO. 199



SECOND FLOOR. NO. 199

DESCRIPTION OF DESIGN NUMBER 200

This design is an improved modification of the preceding one (Number 199). The exterior and the second story are exactly the same. The changes consist in the addition of an ample pantry (large enough for a barrel of flour and all culinary supplies), and a one-story kitchen. There is a cellar under the whole of the main house, with convenient access to the cellar stairs.

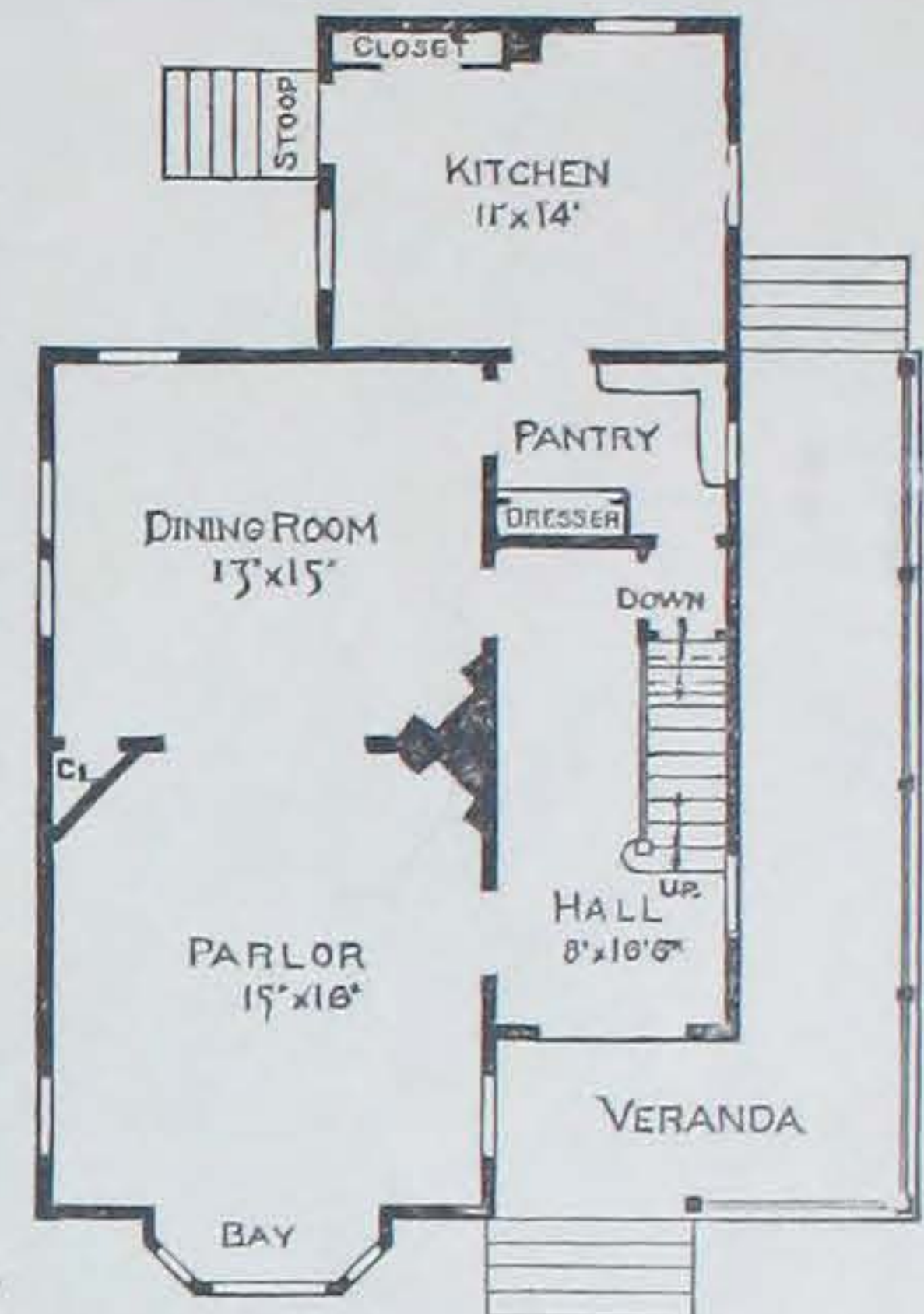
COST: \$1,975, complete.

Exceedingly comfortable as a residence, this house presents a finer appearance than many houses that cost two or three times as much.

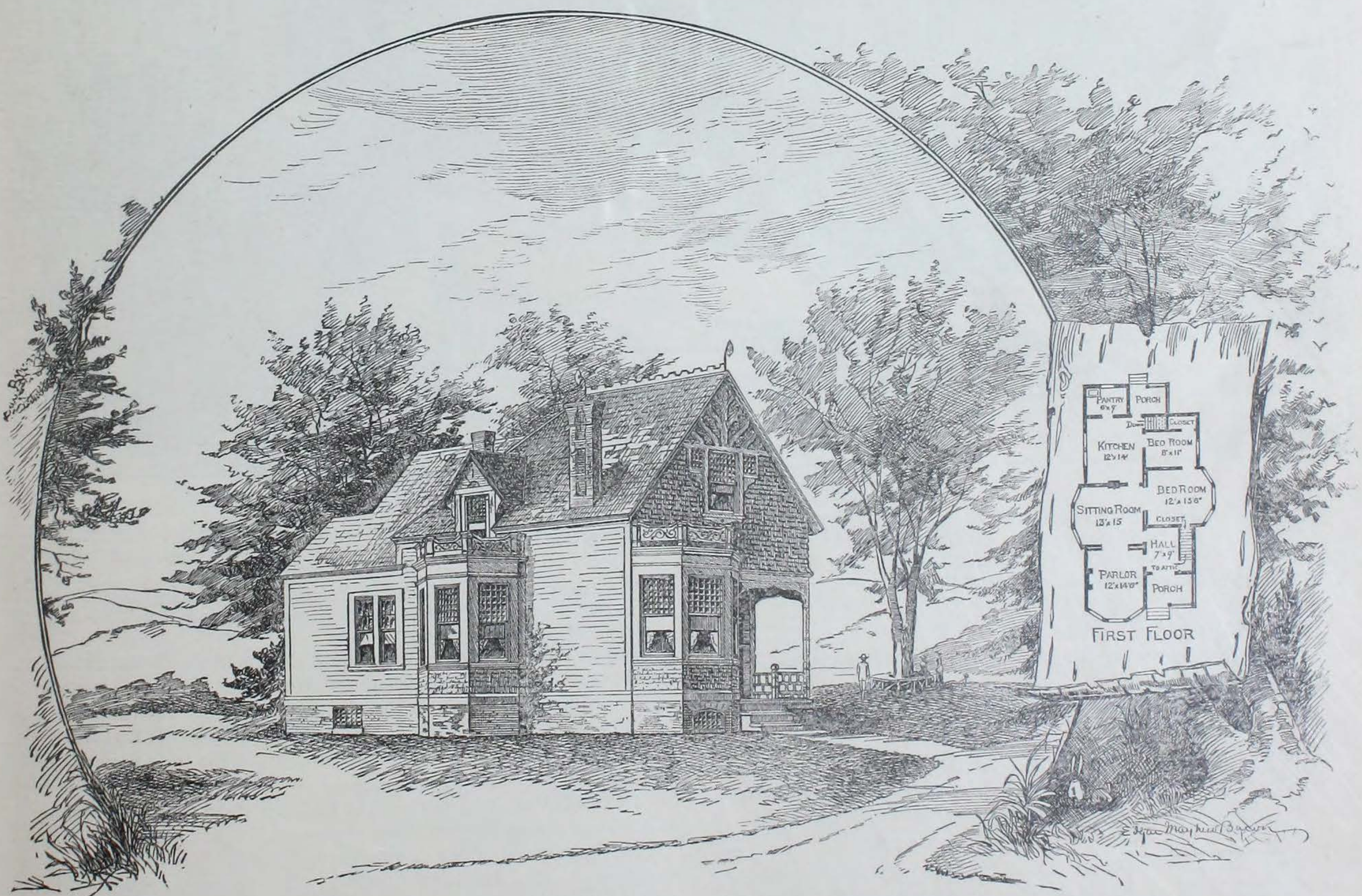
A bay-window is an exceedingly pleasant feature in a room, and it should be borne in mind that where there is plenty of space a bay-window or two can be added to almost any of our plans at small additional cost and without injury to the appearance. In fact, it is generally an improvement as to appearance.

In this plan (Number 200), for instance, a bay-window added to the dining-room would make the room pleasanter, materially increase its size, and its effect on the exterior would be beneficial.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]



FIRST FLOOR. NO. 200



DESIGN No. 201. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 201

SIZE OF STRUCTURE: Front, 30 ft. Side, 50 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 10 ft., 6 in.; Second Story, 9 ft., 6 in.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Gables, shingles; Roof, shingles.

COST: \$2,250, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—A cellar under the rear part.

If more veranda is wanted it can be carried around the side. A reduction in cost is effected by omitting the sliding doors and using curtains in place of them.

Three or four rooms can be obtained in the second story, if desired. Our estimate includes two only.

In a lumber district the cost is greatly reduced.

This design has three immense bay-windows.



DESIGN No. 202. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 202

SIZE OF STRUCTURE: Front, 32 ft. Side, 41 ft., 6 in., including piazzas.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Basement, 7 ft.; First Story, 8 ft., 9 in.; Second Story, 8 ft.

MATERIALS: Foundation, stone; First Story, wood; Second Story, wood; Roof, shingled.

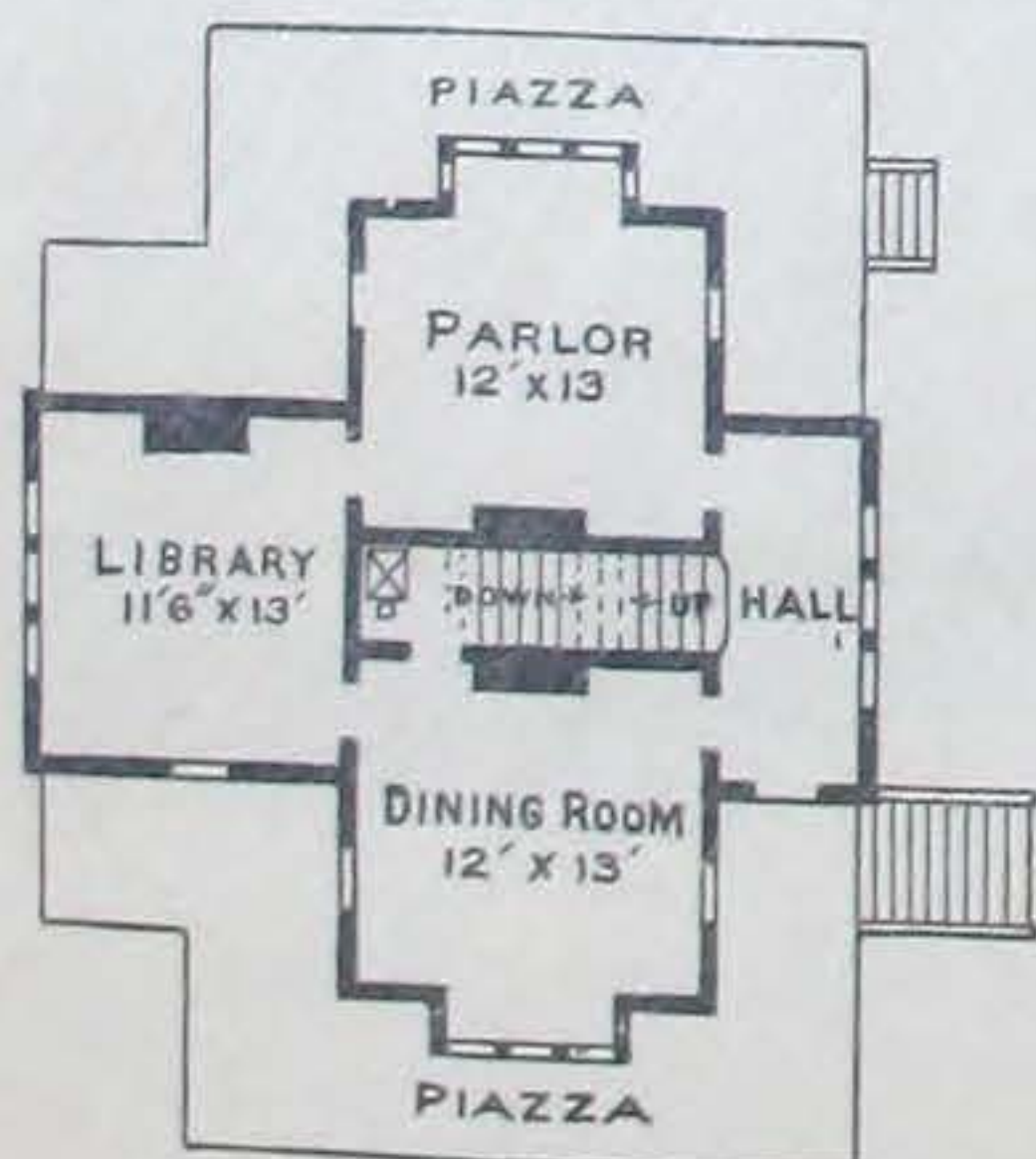
COST: \$2,850, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.



FIRST FLOOR. NO. 202

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—An excellent design in the Swiss style—a style that has many beauties and conveniences, and that is growing in popularity. There is the utmost economy of room—not an inch is wasted. Two large piazzas almost surround the first story, and four pretty hanging balconies, covered by the wide projecting eaves, adorn the second story.

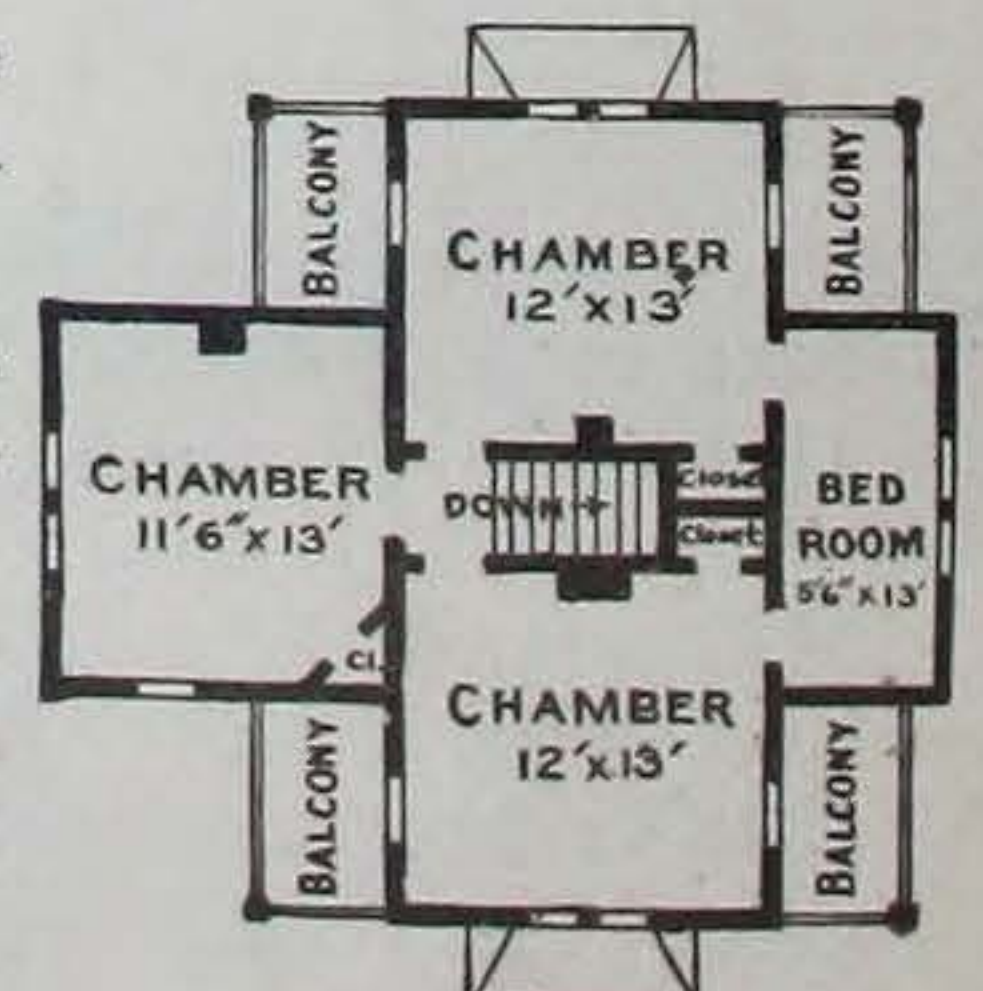
The small bed-room on the right makes a good children's room, as it connects with the two larger chambers.

This house was built on sloping ground, the kitchen and servant's bed-room in the basement, under the dining-room, with dumb waiter service between them.

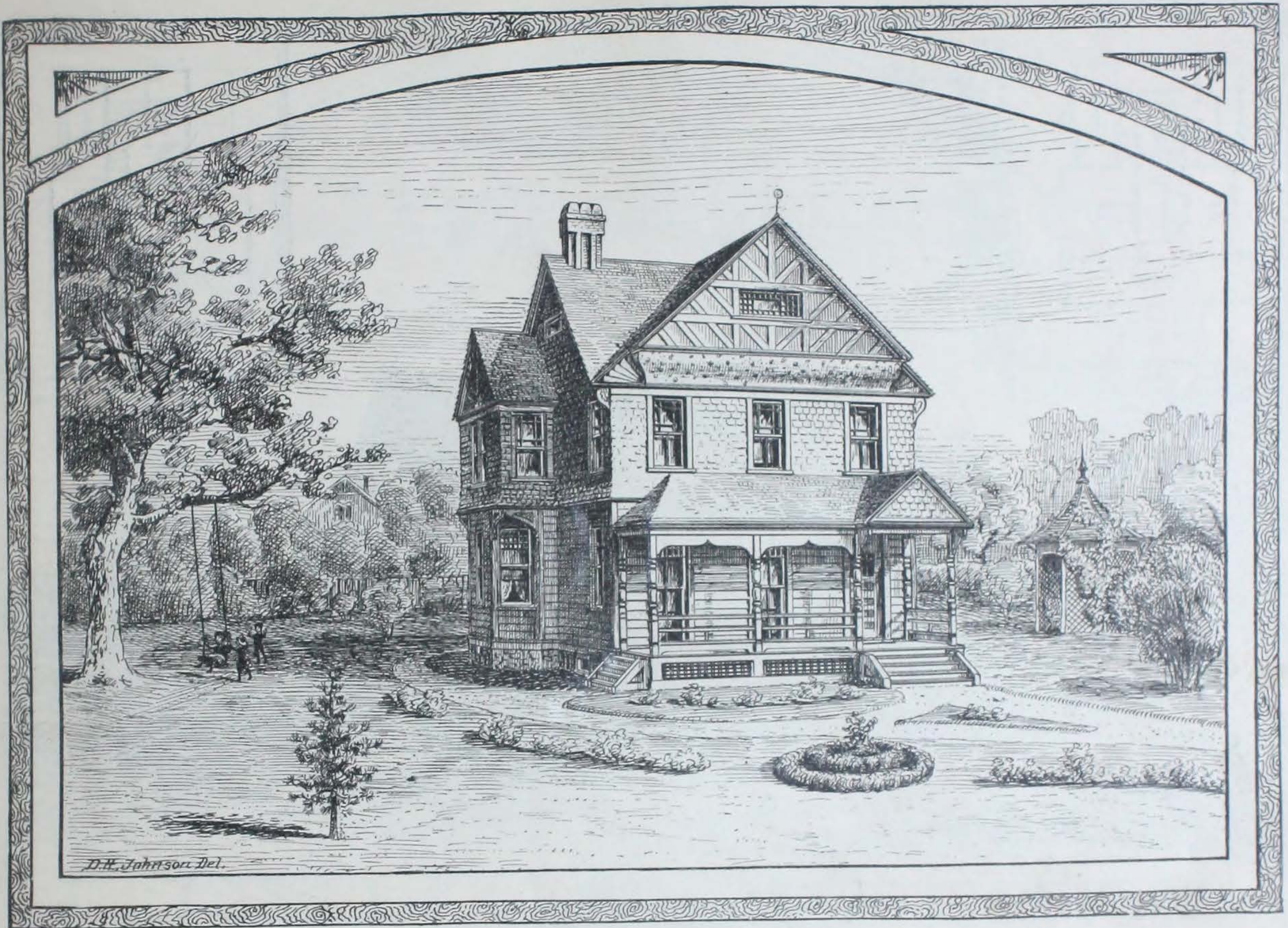
The apartment marked library can be made into a kitchen if preferred, or an extension built on to the library side.

It reduces cost amazingly to set this house on brick piers or posts and have little or no cellar.

The bold overhanging eaves, the shady balconies and the extensive piazzas make this a capital design for a summer cottage; roofing the piazzas completes it for such a purpose.



SECOND FLOOR. NO. 202



DESIGN No. 203. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 203

SIZE OF STRUCTURE: Front, 24 ft., 6 in. Side, 35 ft., inclusive of veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft., 3 in.; Third Story, open attic.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Gables, panelled; Roof, shingled.

COST: \$1,800, all complete, except grates or heaters.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

SPECIAL FEATURES.—A cellar under the whole house, with access to it from the kitchen. A stairway to the attic is provided, where two good rooms can be finished if desired.

Wide openings between the hall, parlor and dining-room make these apartments very attractive and roomy. The central and corner windows of the dining-room give a beautiful bay-window effect to that apartment.

In the second story are four bed-rooms and a bath-room, each with a good closet.

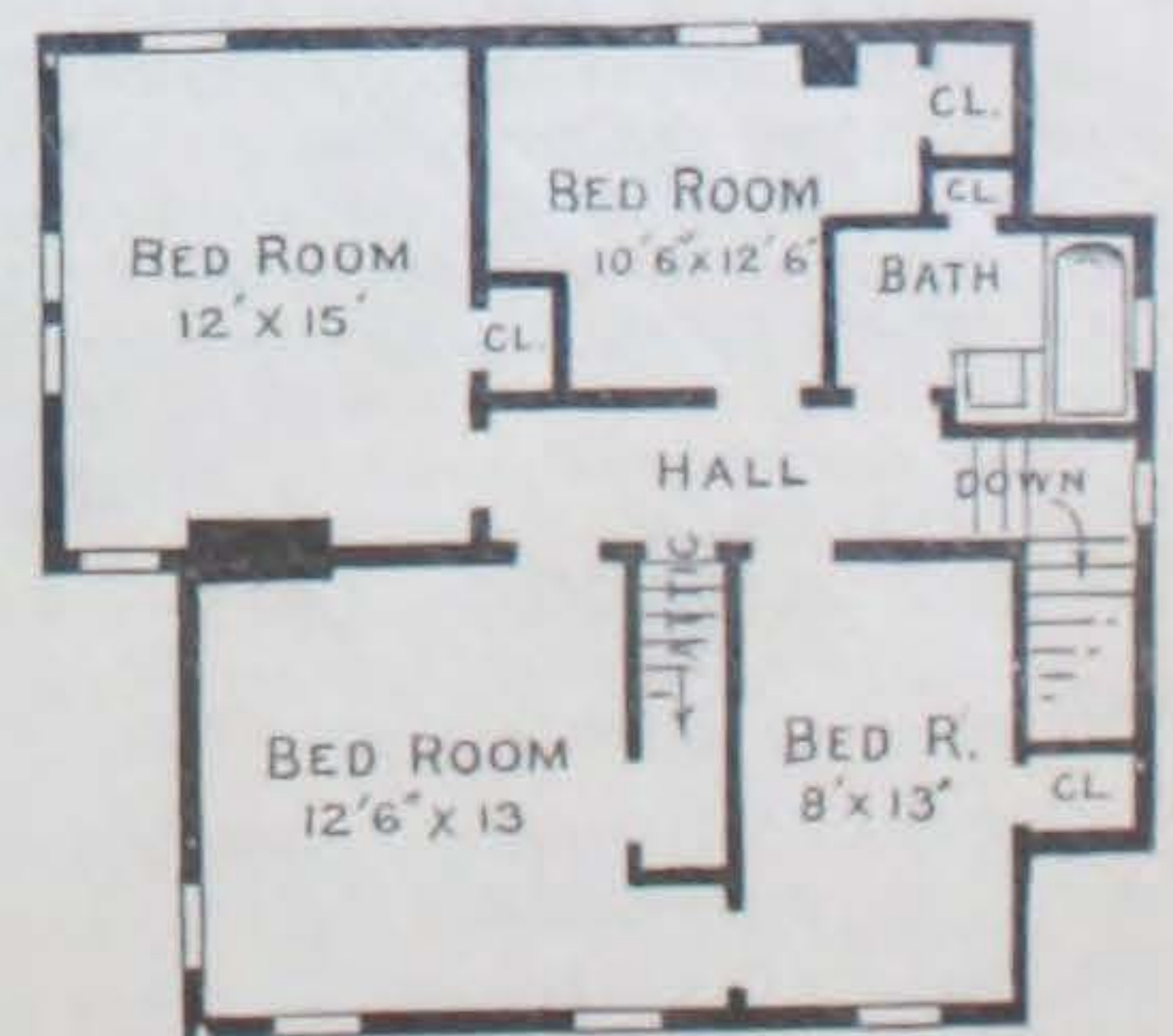
A good way to heat this house is by fireplace heaters in the parlor and dining-room, which would heat the two chambers above also. The hall and other bed-rooms, except in the coldest weather, would receive sufficient heat from the other rooms to be comfortable.

A furnace in the cellar would heat the house more perfectly, and we will indicate the proper position of the pipes and registers on the plans if it is desired to use one.

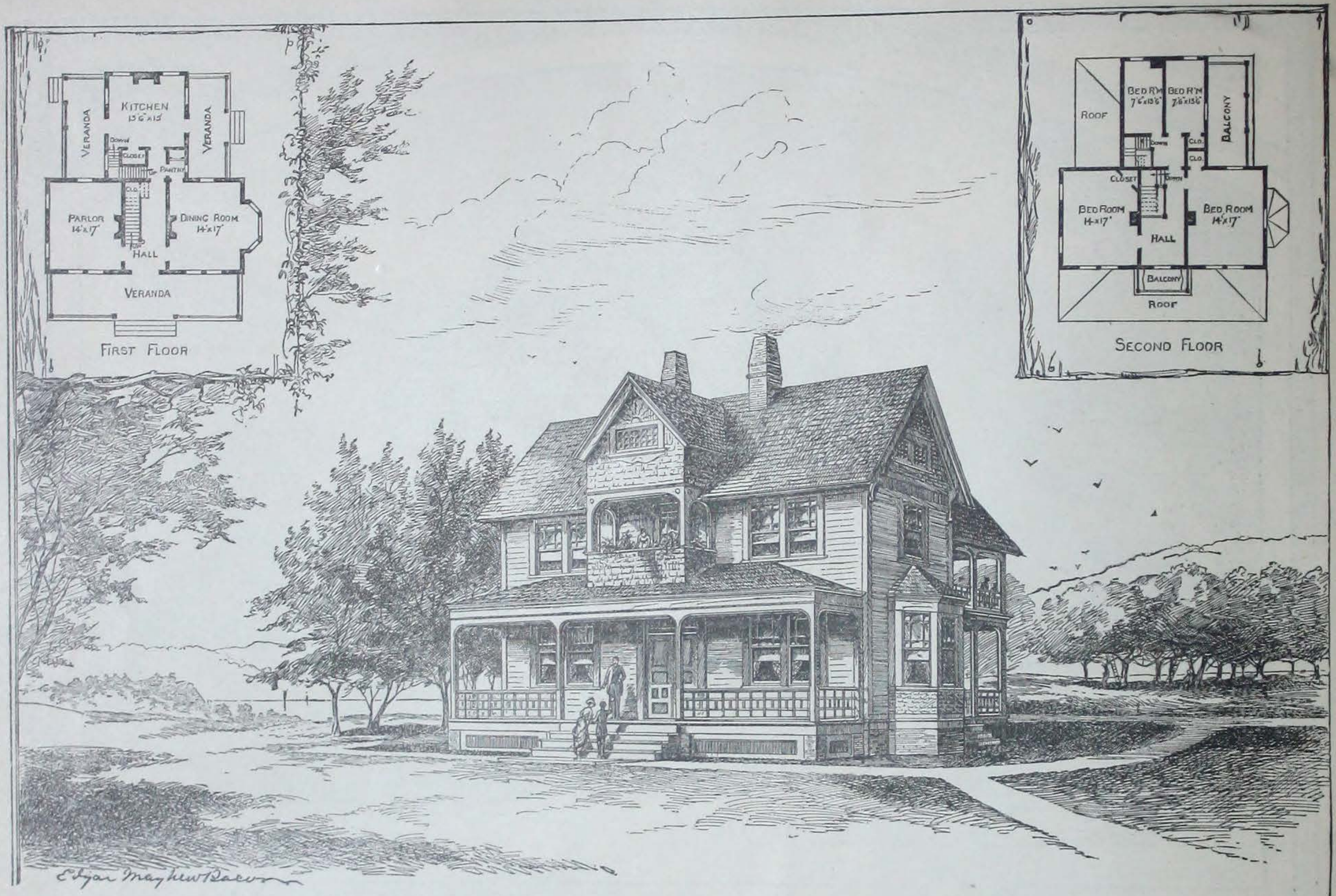
To enlarge the accommodations of this house, a one-story kitchen extension can be built in the rear, at small expense; then, by removing the closet and pantry and the partition forming the present small rear hall, a fine sitting-room or library is obtained, which should be connected with the dining-room by a wide opening or double doors.



FIRST FLOOR. NO. 203



SECOND FLOOR. NO. 203



DESIGN No. 204. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 204

SIZE OF STRUCTURE: Front, 38 ft. Side, 46 ft., inclusive of veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 10 ft.; Second Story, 9 ft.; Third Story, open attic.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, clapboards; Gables, shingles; Roof, shingles.

COST: \$3,000, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

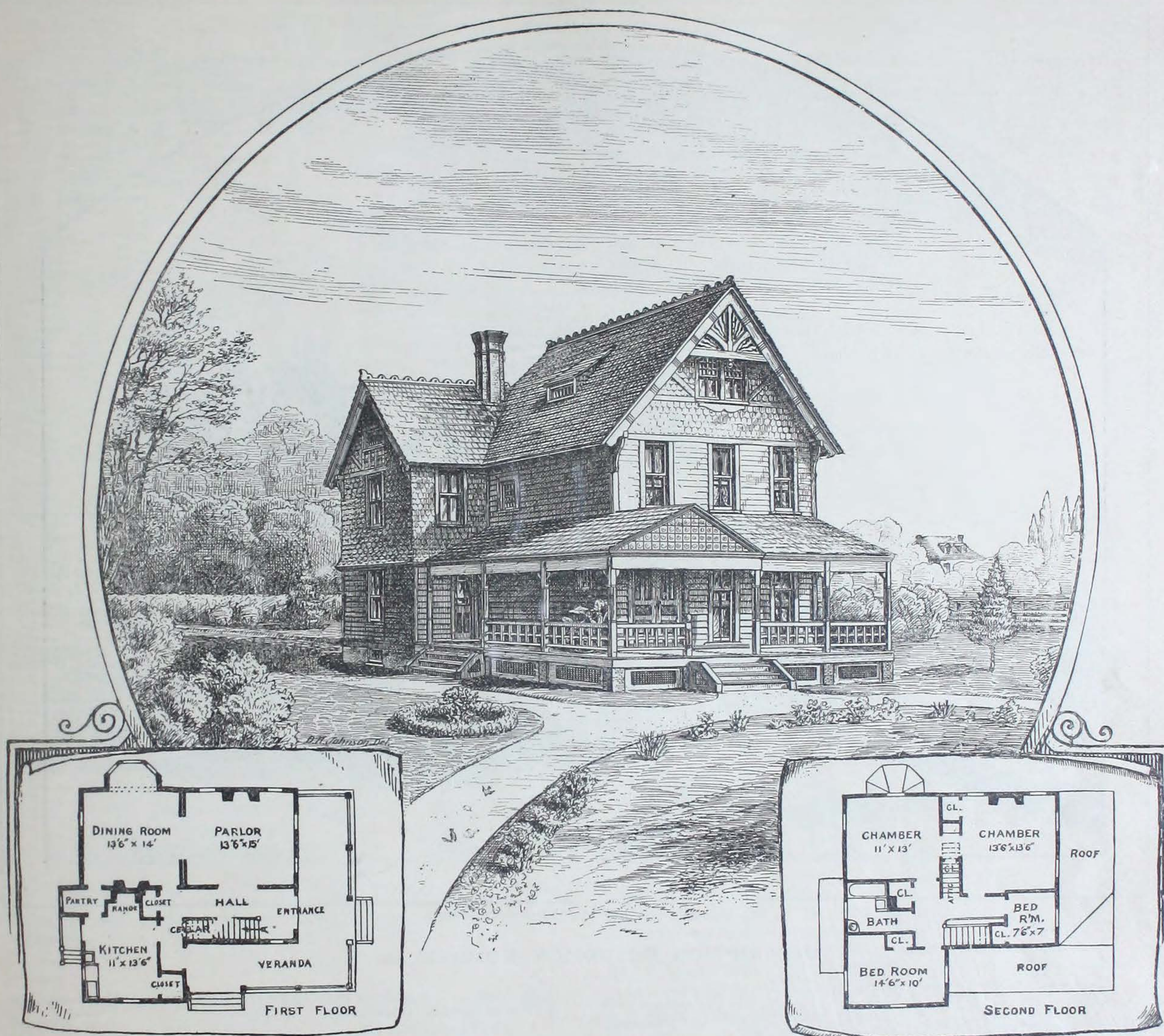
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—A good Southern house. Hall through the centre, well ventilated and with plenty of verandas and covered balconies. Open fireplaces, wood mantels and a cellar under the kitchen.

One of the side verandas enclosed makes a good conservatory. To reduce cost use posts set in concrete, or brick piers for foundations. It is a great mistake to suppose that posts do not make good, firm and enduring foundations. They have stood the test of supporting some of the largest factories, filled with heavy machinery, for years. The only danger is in rotting at the ground surface. Wood that is wholly and continuously under ground or under water never rots. It is not the wetting but the drying that causes the decay. Setting the posts in concrete, as we specify, thoroughly protects them from any possibility of dampness or wetting and, therefore, makes them perfectly safe. The concrete hardens and becomes like stone, so that the building actually rests on stone piers.

In the South the kitchen is usually placed in a detached building, but there is no good reason why it may not be connected with the main house, if it is well separated by pantries, closets, store-rooms, and a passage of some length.

The artistic use of colors in the decoration of buildings has become a subject of great interest. Cultivated people will endure no longer the "white house and green shutter style" for exteriors, and "graining" for interiors. It costs no more, or but little more, to decorate the house according to correct principles, and make it really pleasing and delightful to the eye. By the right use of colors architectural defects are made less striking; low buildings are given the appearance of height; narrow buildings are given breadth and small buildings are made to appear larger. The commonest houses are often made beautiful by the proper study and application of paints and stains.



DESIGN No. 205. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 205

SIZE OF STRUCTURE: Front, including veranda, 29 ft.; extreme width, including bay-window, 34 ft., 4 in.; Side, 39 ft., 9 in., including veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft.; Second Story, 8 ft., 6 in.; Third Story, open attic.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, clapboards; Roof, shingles.

COST: \$2,500, complete, except grates and range.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing

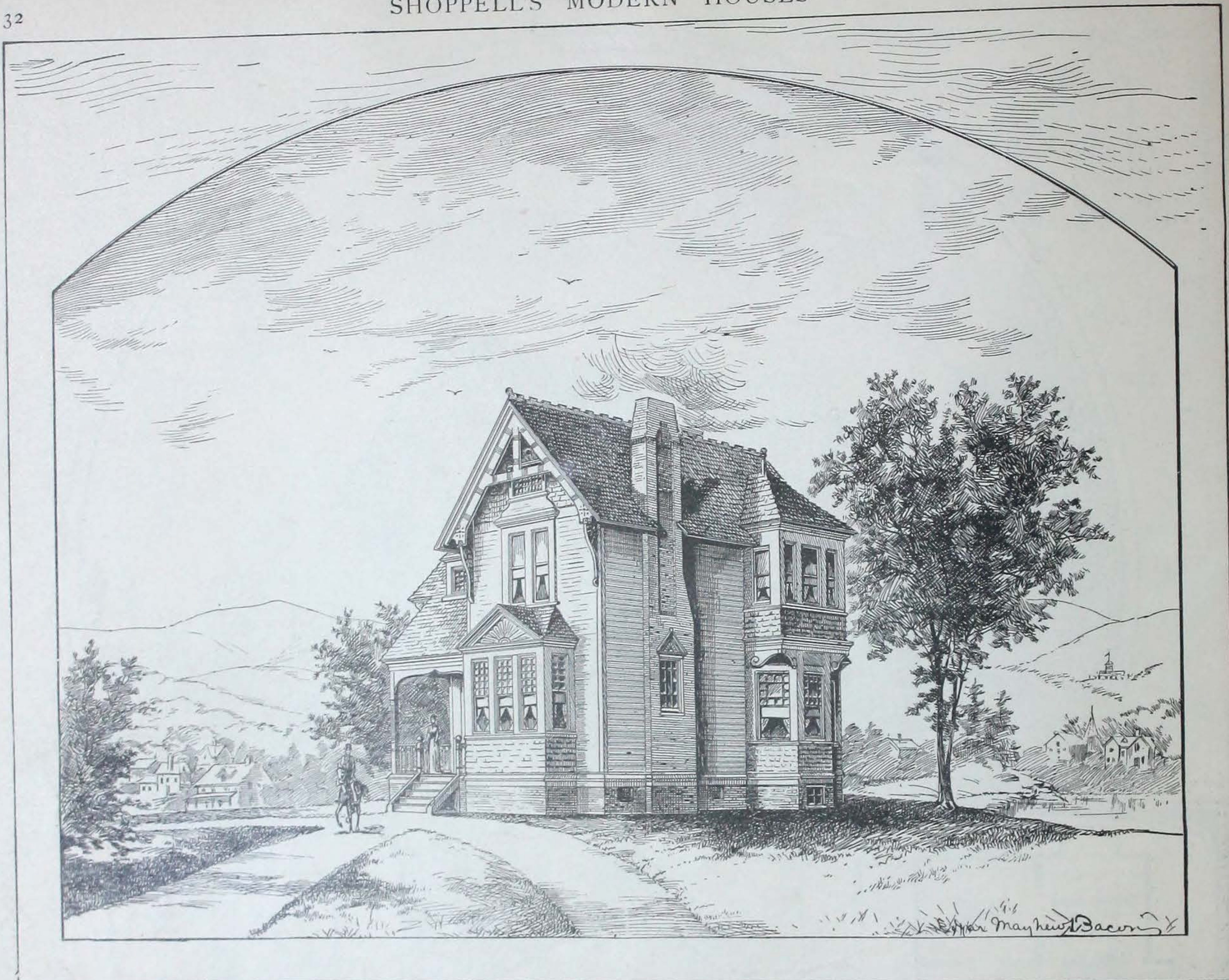
beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—A good cellar under the whole house.

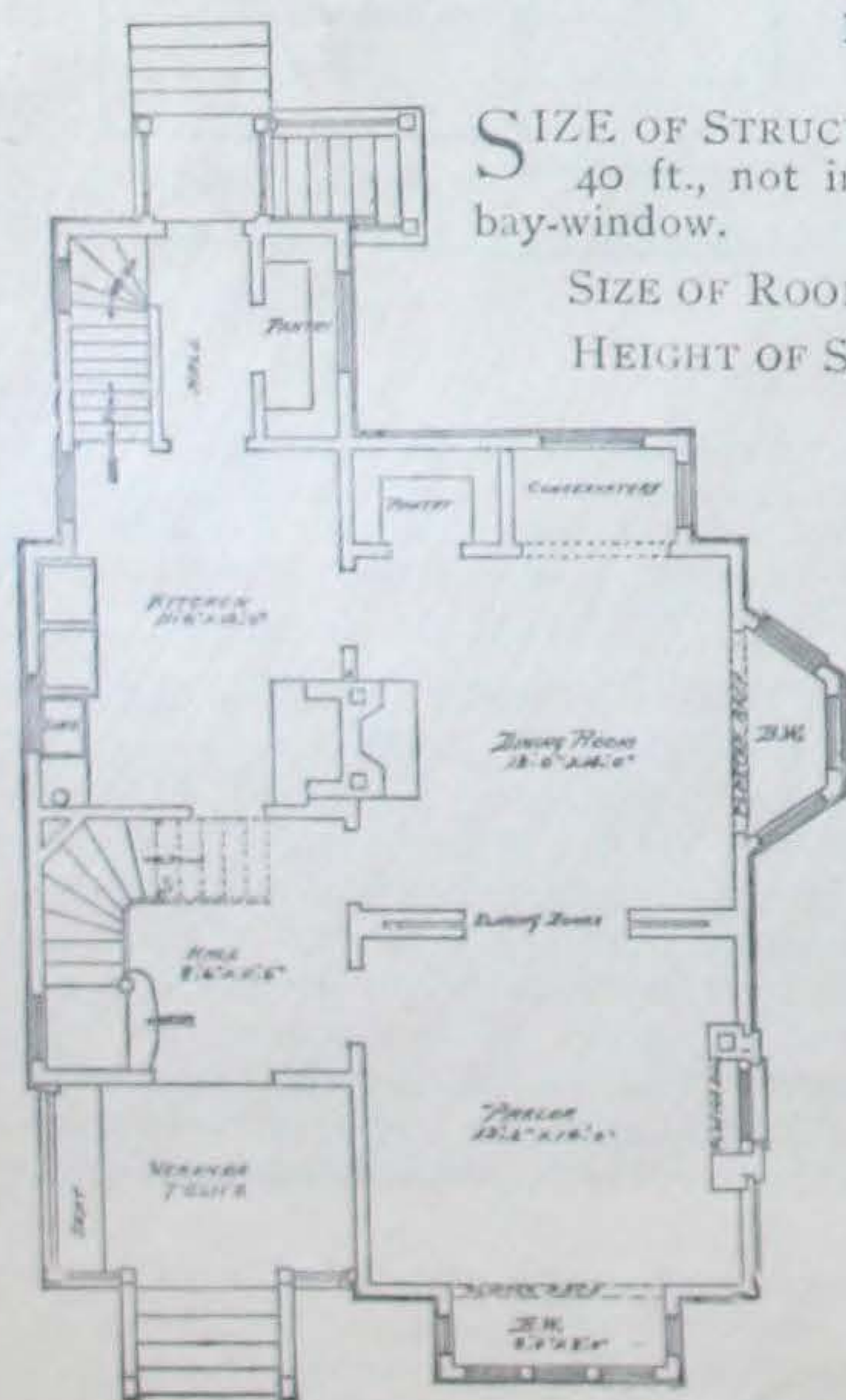
On the ground floor, to the right of the hall and entered separately from it, are parlor and dining-room connected with each other by sliding doors. Double folding doors connect parlor and hall. With these large openings a fine circulation of air is obtained. A back hall gives a side entrance from the veranda. The dining-room is materially enlarged by a bay-window, giving a view out to the street. This room and the parlor have fireplaces for open fires or where fireplace heaters can be set. Using the latter would heat the upper floor also. In any case the ordinary close stoves should be avoided, as they are, no doubt, responsible for much ill health.

The kitchen has a pantry, closet, range and a boiler to supply hot water through the house. Four bed-rooms, bath-room and good closets on the second floor. The attic provides two good rooms if required, and a stairway to the same is provided.



DESIGN No. 206. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 206



FIRST FLOOR, NO. 206

SIZE OF STRUCTURE: Front, 27 ft. Side, 40 ft., not including the projection of bay-window.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft., 4 in.; Second Story, 8 ft., 6 in.

MATERIALS: Foundation, stone and brick; First Story, clapboarded; Second Story, clapboarded; Gables, shingled; Roof, shingled.

COST: \$2,900, all complete, except grates or fire-place heaters and range.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City,

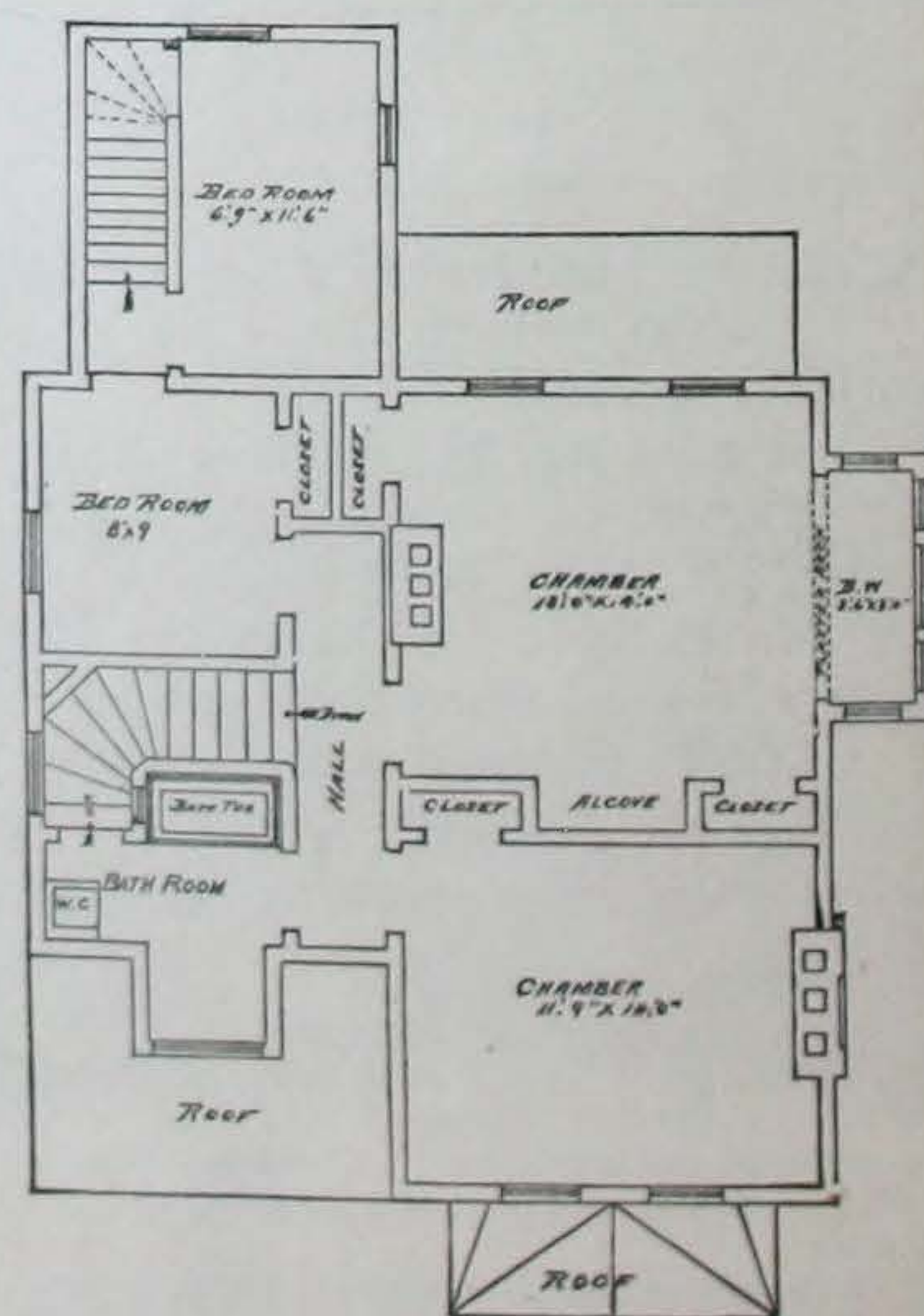
October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost.

A cellar under the kitchen and dining-room, and an outside and inside stairway to it. Stationary wash tubs. The attic is unfinished, but it has space for two small rooms, and a stairway to it is provided.

There is an abundance of closets, the bay-windows are large, the conservatory can be used as an alcove to the dining-room, or as a reading recess, if preferred.

Hardwood mantels, newel and balusters of ash, trim of soft wood, either painted or stained.

A novel feature that is very attractive in execution (it has been built a number of times), is the outside chimney pierced by a small stained glass window over the mantel,



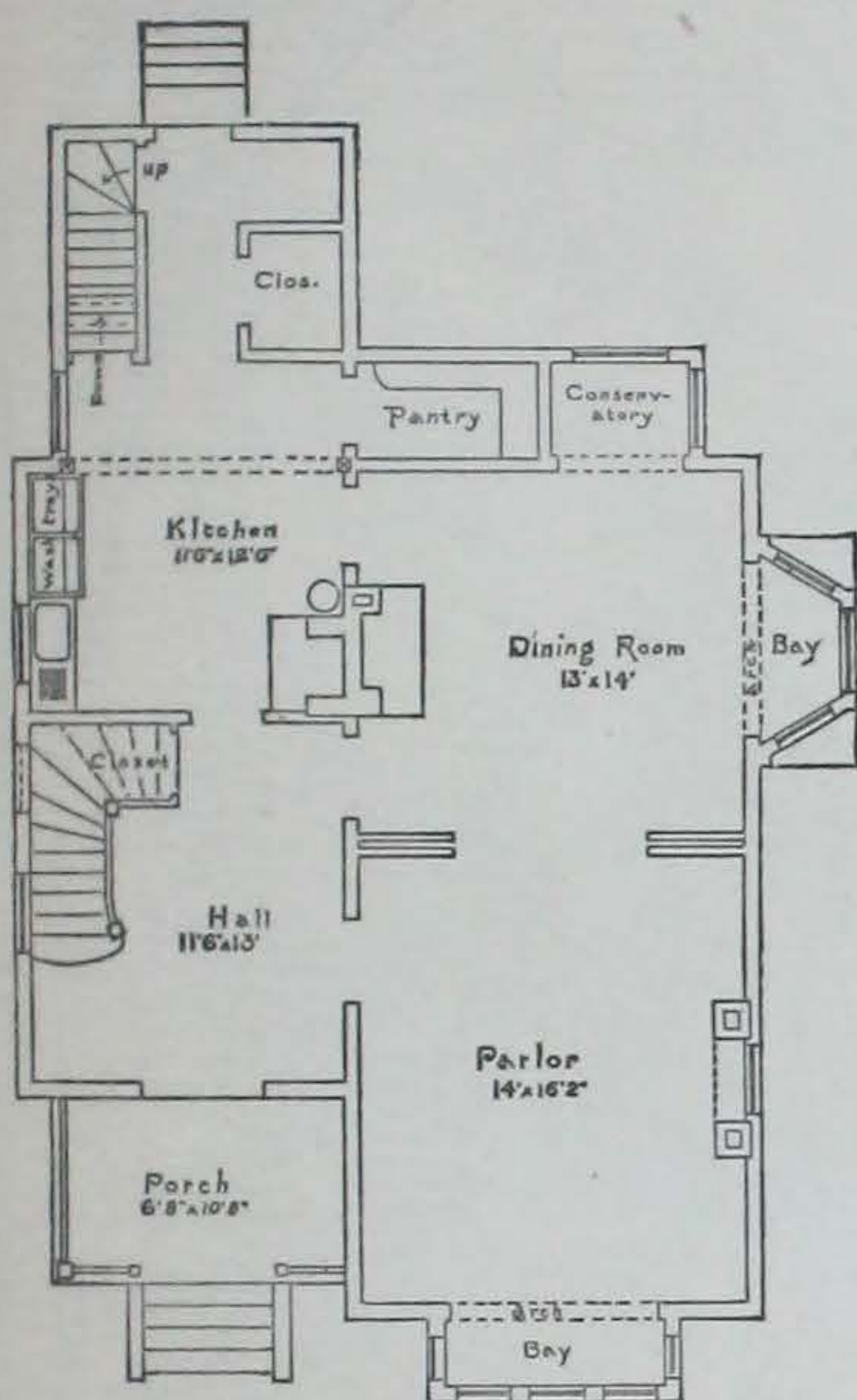
SECOND FLOOR, NO. 206

DESCRIPTION OF DESIGN NUMBER 207

SIZE OF STRUCTURE: Front, 27 ft. Side, 43 ft., 2 in., not including bay-windows.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft. 6 in.; First Story, 10 ft., 6 in.; Second Story, 9 ft.; Third Story, open attic.



FIRST FLOOR. NO. 207

MATERIALS: Foundation, brick and stone; First Story, clapboarded; Second Story, clapboarded; Roof, shingled.

COST: \$2,800, complete, except heaters or range.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

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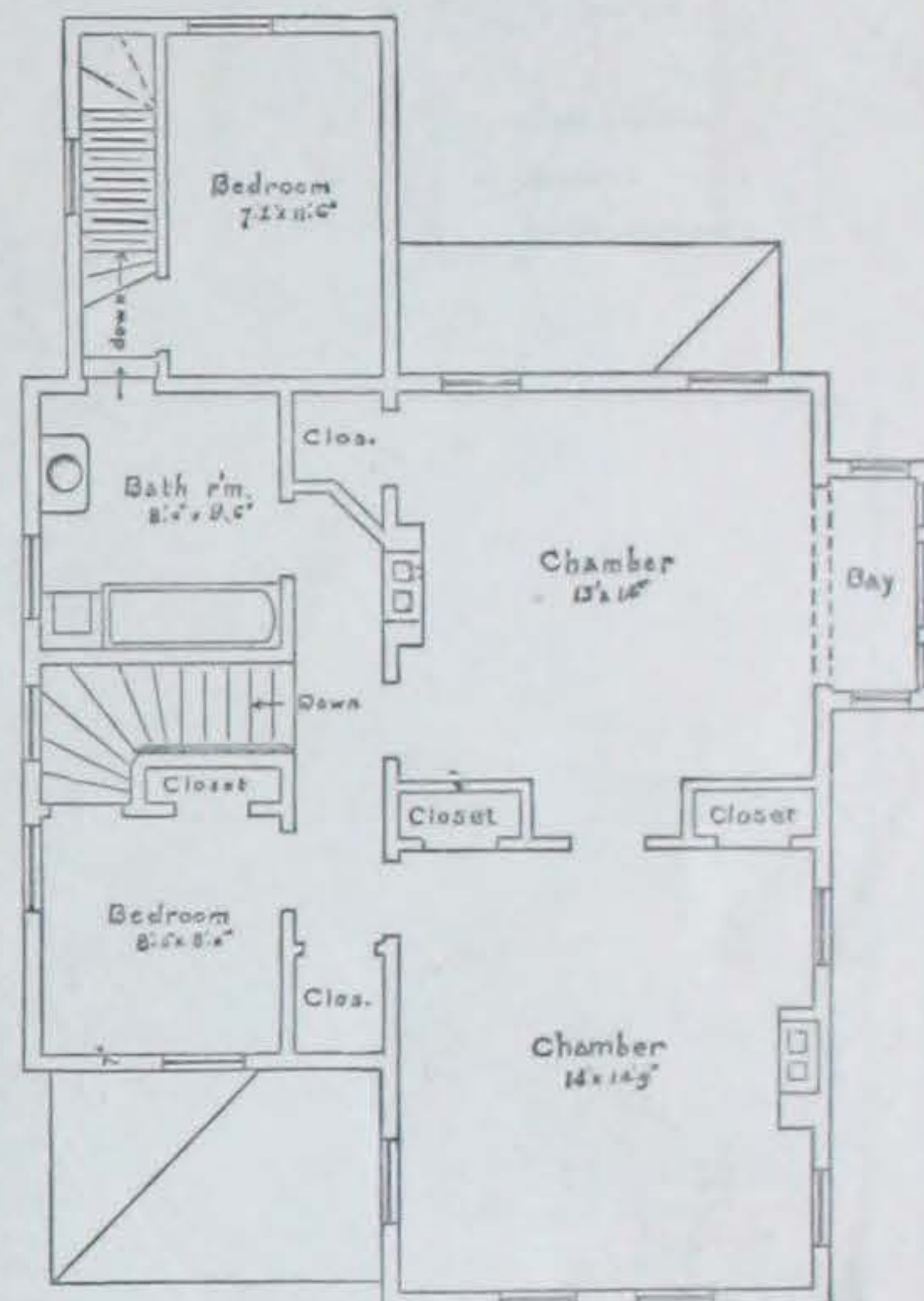
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—The exterior appearance is very much the same as Number 206. This house is three feet deeper, but the plumbing is less expensive, which with some other minor economies of construction, described in the specifications, reduce the cost below that of the preceding design.

Cellar under the whole house.

The bath-room, instead of being in the front of house, as in Number 206, is over the kitchen, is large and well lighted, and has every convenience.

The closets are plentiful and large. The servants' bed-room over the kitchen is reached by the back stairway, and can be shut off from the rest of the house.



SECOND FLOOR. NO. 207

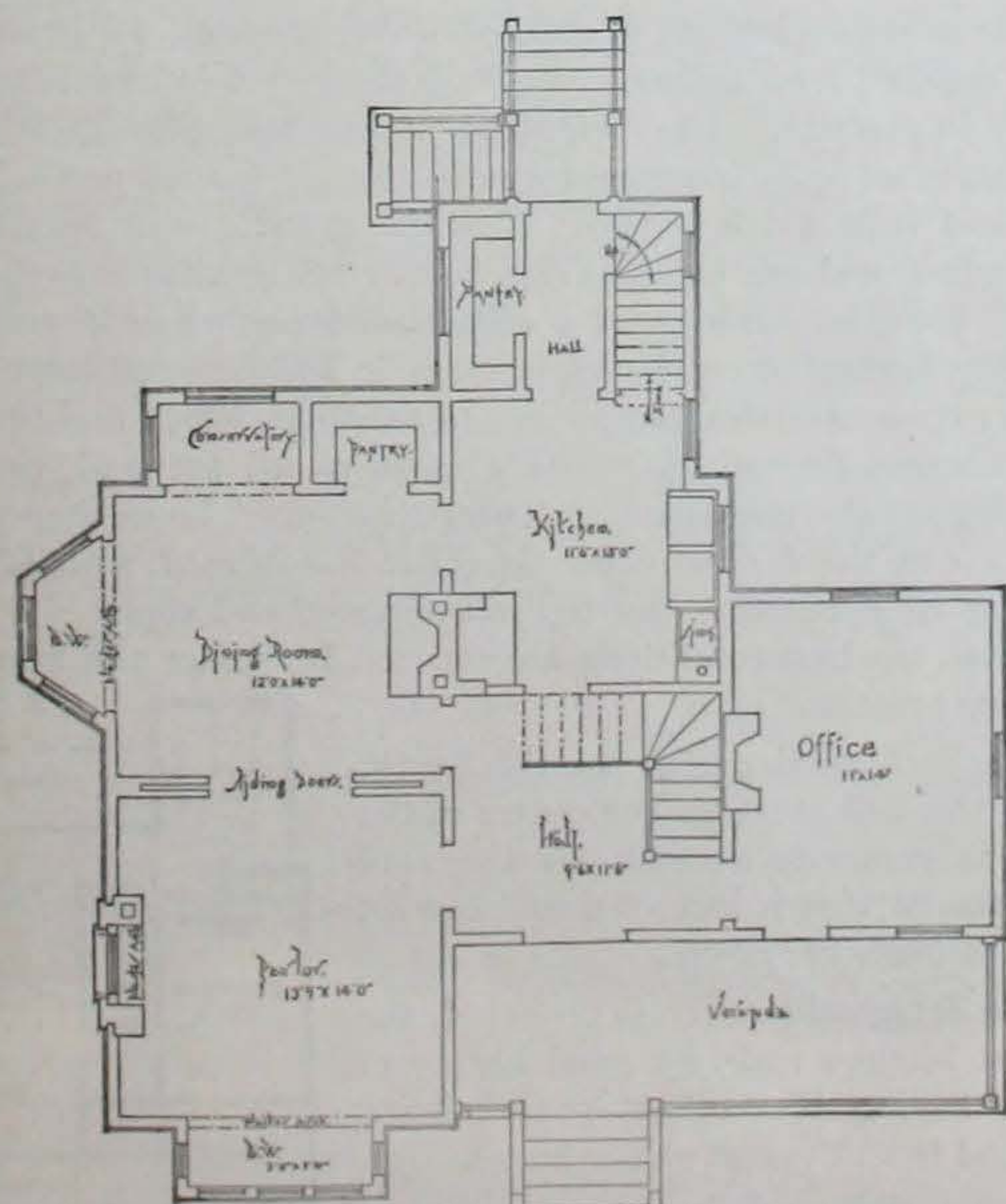
DESCRIPTION OF DESIGN NUMBER 208

SIZE OF STRUCTURE: Front, 38 ft., 8 in. Side, 39 ft., 9 in., not including bay-windows.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft., 4 in.; Second Story, 8 ft., 6 in.; Third Story, open attic.

MATERIALS: Foundation, brick and stone; First Story, clapboarded; Second Story, clapboarded; Gables, shingled; Roof, shingled.



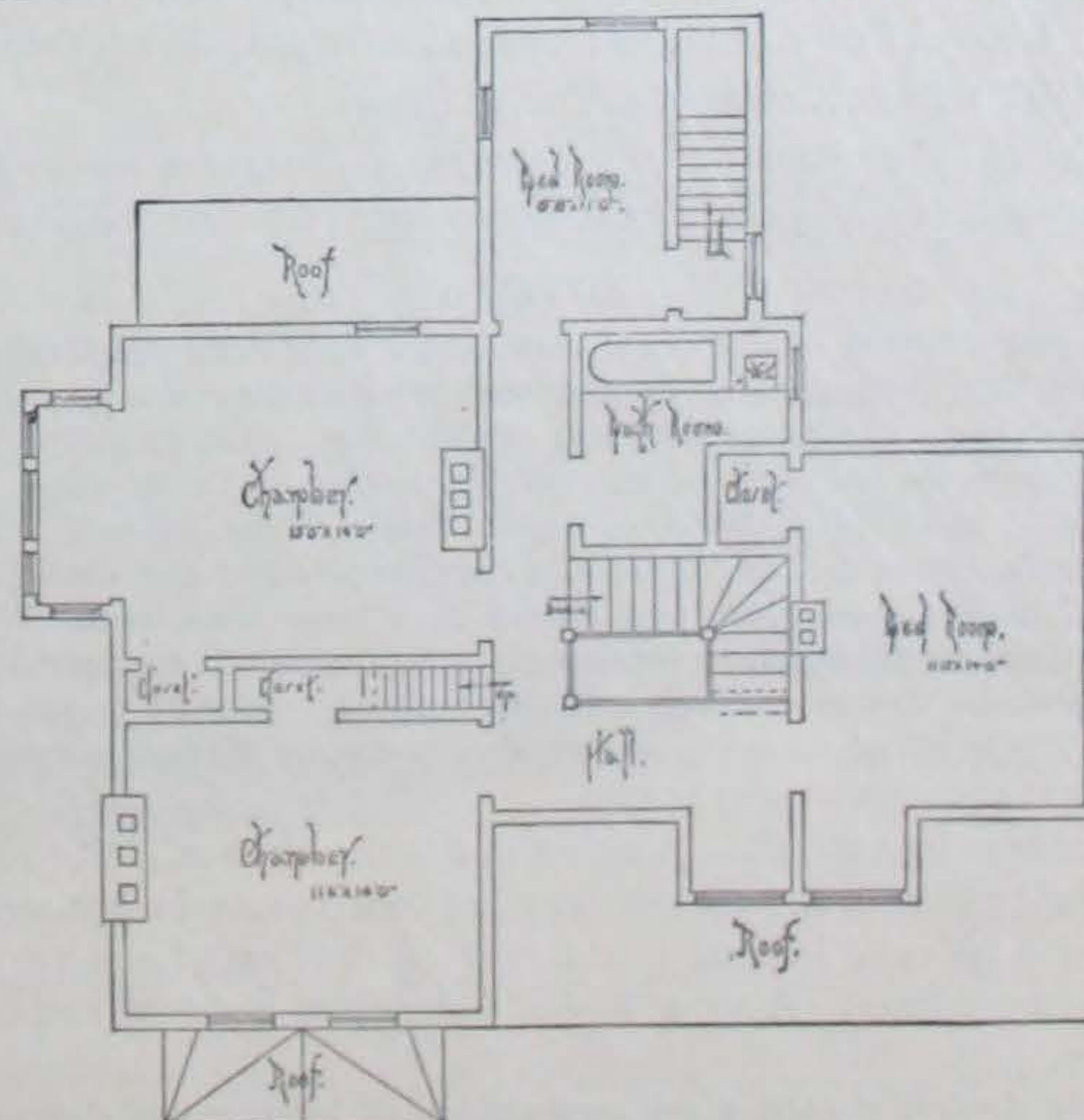
FIRST FLOOR. NO. 208

COST: \$3,400, all complete, except grates or fireplace heaters or range.

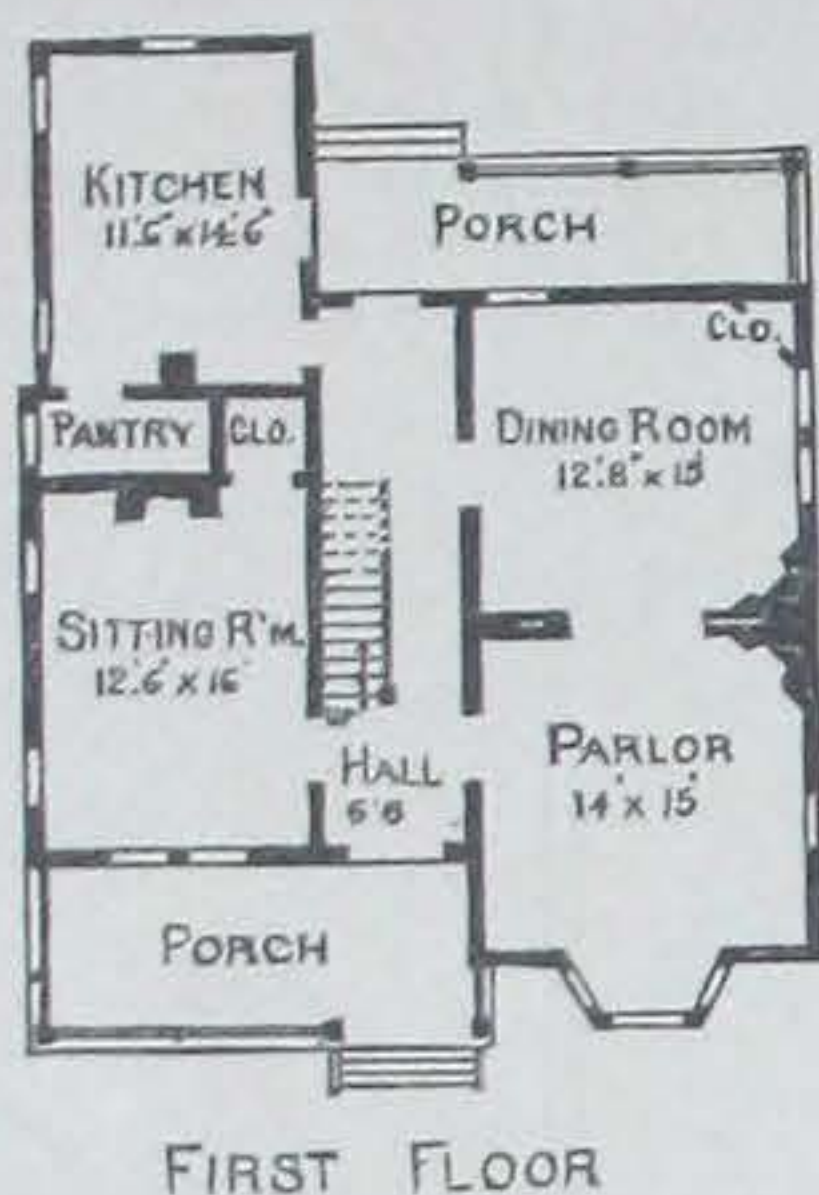
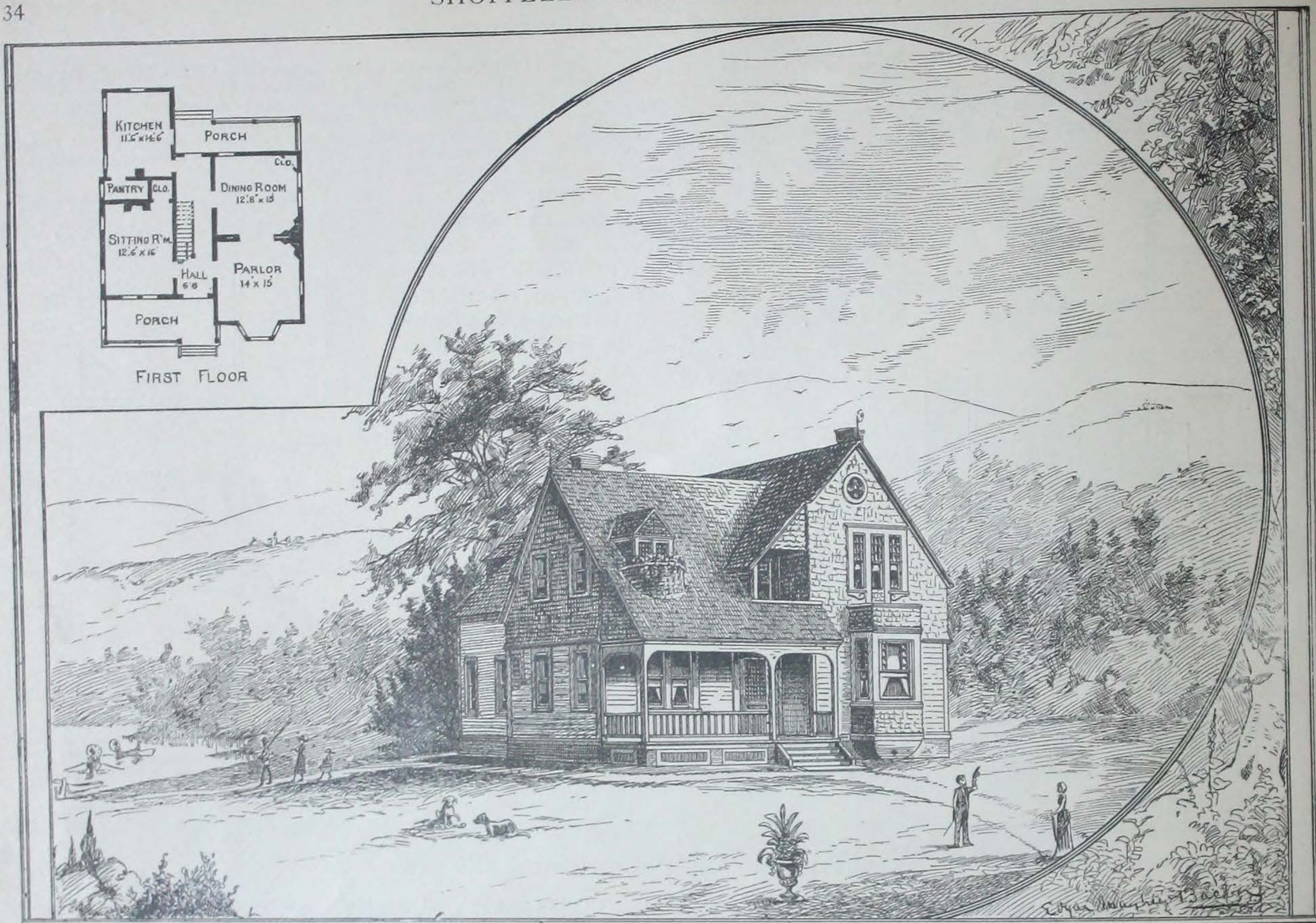
[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—These plans and the exterior are similar to Number 206; they are reversed, and a wing is added to adapt them for use by a Doctor of Medicine or other professional gentleman. Or the wing makes a capital billiard and smoking-room, a well-lighted studio for a painter, a secluded study for a minister, but best of all, a restful sitting-room for the lady of the house herself.

By locking the kitchen door and the door leading to the rear bed-room, on the second floor (servants' room), the domestics can be excluded from the rest of the house—a feature that some people like.



SECOND FLOOR. NO. 208



DESIGN No. 209. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 209

SIZE OF STRUCTURE: Front, 35 ft., 6 in. Side, 44 ft., 6 in., including veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 10 ft.; Second Story, 9 ft., 3 in.

MATERIALS: Foundation, brick and stone; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$2,200, complete, except grates.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

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This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—A cellar under the kitchen.

A hall through the middle insuring cool rooms in hot weather. A covered balcony formed in the roof of the veranda—a very cosy and pretty corner. Also a flower balcony in front of the dormer window.

This design presents an appearance of beauty and domesticity that is characteristic of the Colonial style—the only style of domestic

architecture in this country that we have any reasons to be proud of.

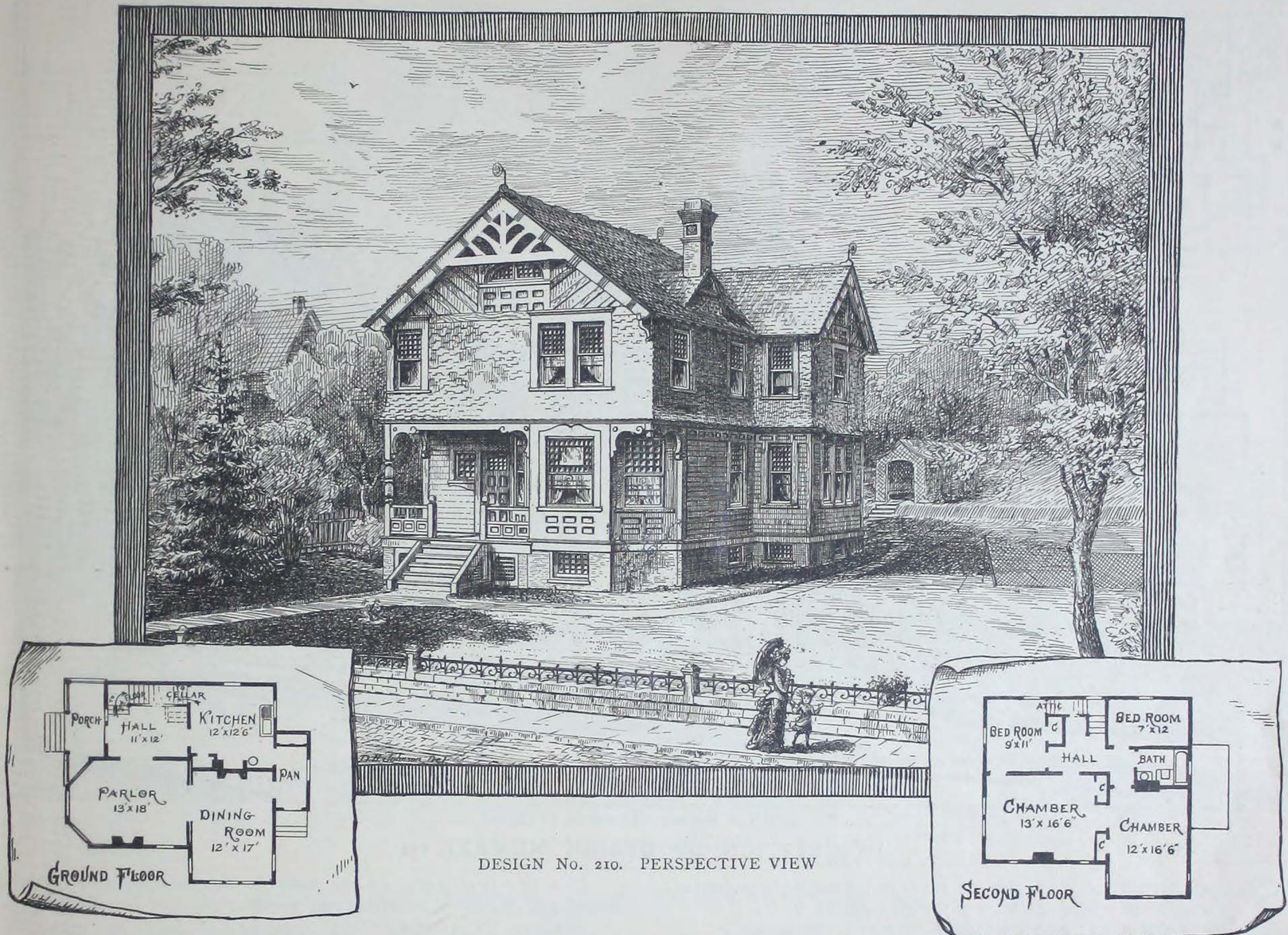
For suburban houses, in mild or warm climates, we recommend small cellars or no cellars. We find the result is eminently satisfactory in practice. The conditions of life now differ greatly from the time when every householder cultivated a "garden patch," raised fruit, and kept a cow or two. Now the green grocer supplies our daily wants, and we need an ice box or refrigerator rather than a cellar. More important still, a cellar under the whole house, if imperfectly drained or cemented, is often an unsuspected source of ill health; it accumulates dampness and miasmas, which find their way to the upper floors. Servants dispose of all sorts of trash by throwing it into the cellar, and very sharp-eyed housekeepers may not see it in the dark corners. If cellar is not used, with effective draining (if necessary), the top soil removed and replaced by sand or gravel, the best conditions are secured for under the houses, in ordinary practice.

This is a good design for the South, where the hall through the centre of the house is generally desired, for the very good reason that it insures a cool current of air through the house.

If a detached kitchen is preferred, the present kitchen makes a good library or study, having the advantage of being secluded from the rest of the house.

Large sliding doors connect dining-room and parlor.





DESIGN No. 210. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 210

SIZE OF STRUCTURE: Front, 25 ft., 8 in.; width through dining-room and kitchen, 31 ft.; Side, 32 ft.; Extreme depth, 37 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft., 6 in.; Second Story, 8 ft., 6 in.; Third Story, open attic.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Gables, timbered; Roof, shingled.

COST: \$2,800, all complete, except grates or heater.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—There is a cellar extending under the whole house.

Large sliding doors connect dining-room and parlor.

The omission of the bath-room and the accompanying plumbing would reduce cost \$150.

The water pipes to the bath-room ascend alongside the chimney, so there can be no freezing and bursting of pipes. This arrangement is carried out in all of our plans wherever practicable.

This house can be heated by either furnace, grates or stoves.

The large bay, with three broad windows, extending clear across the front of the parlor is a beautiful feature.

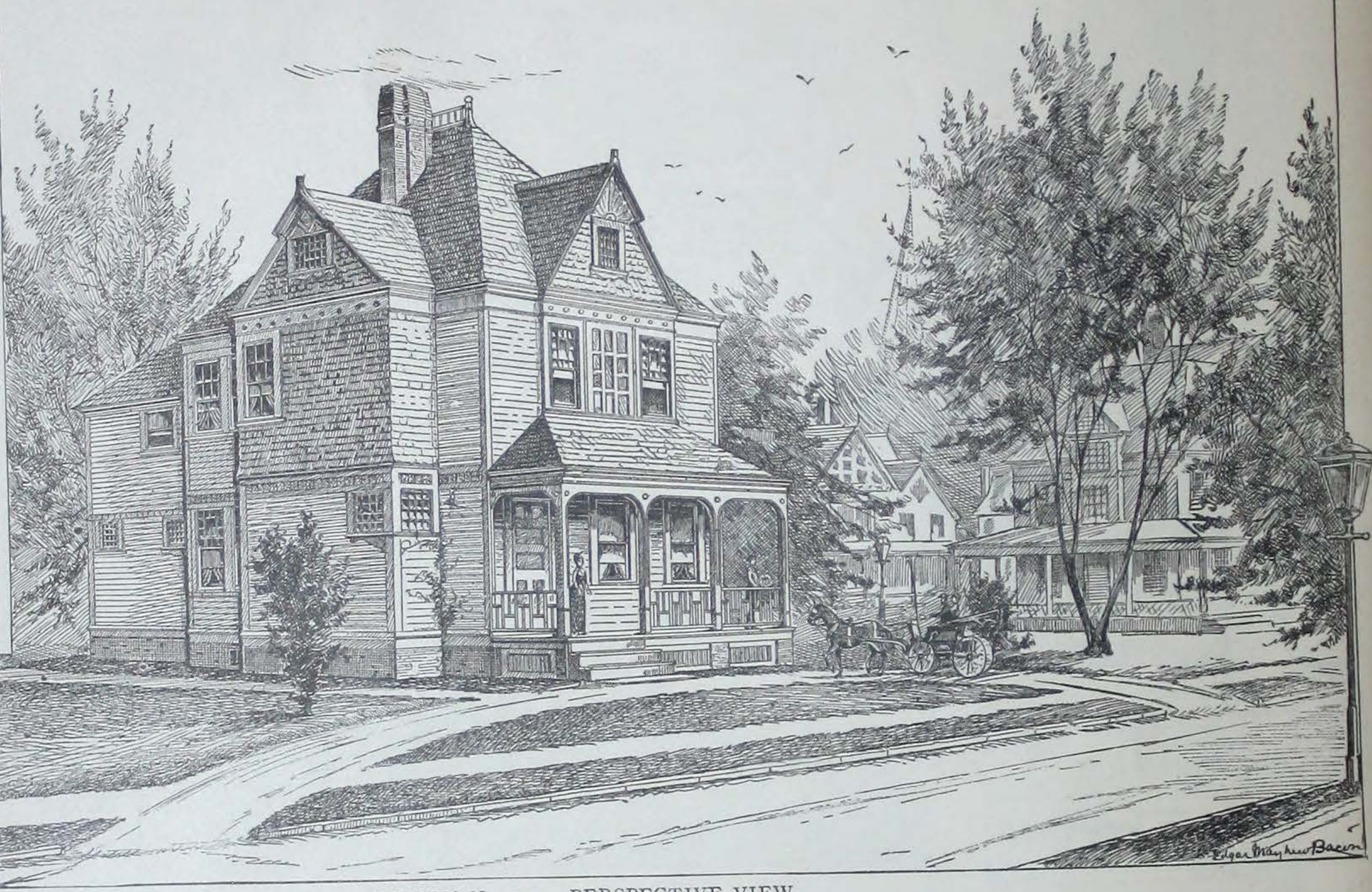
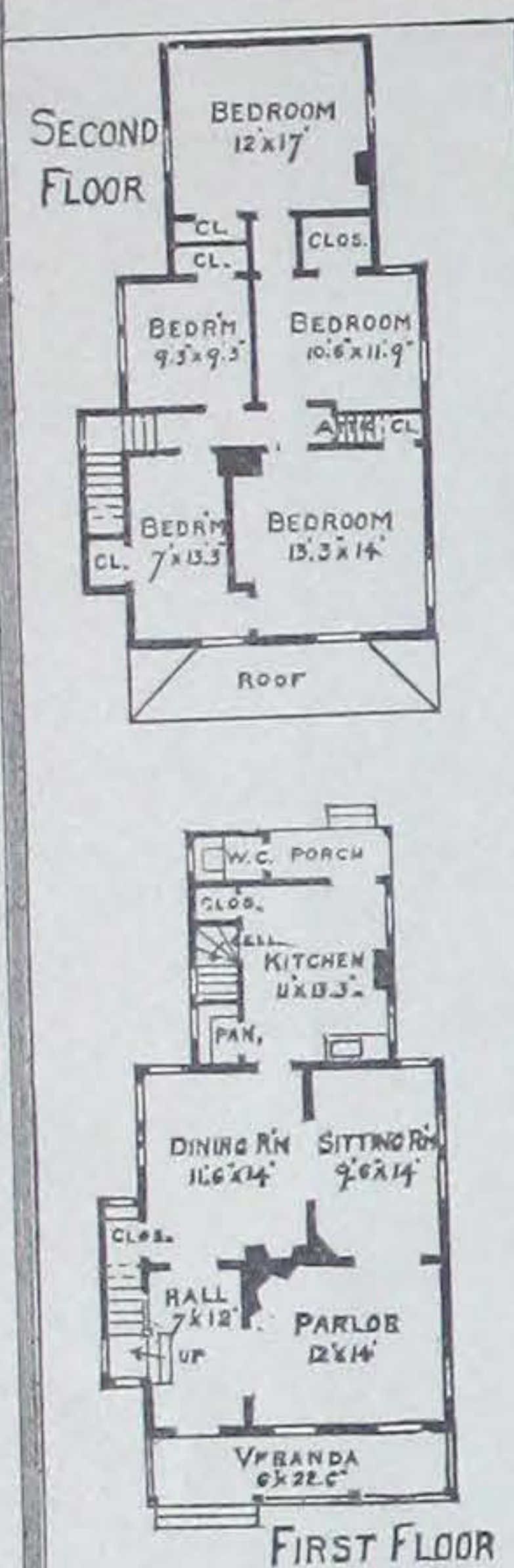
The principal rooms are large, well lighted and connected. Altogether this is a notably handsome and convenient house.

There is plenty of room in the attic for two low bed-rooms or for storage, and a stairway is provided for access to it.

Shingles, as a covering for exterior walls of frame houses, have come into general favor and use within a few years. Besides forming a good and lasting covering they have great value artistically, giving relief to the monotonous plainness of the lap siding so generally used. Cut to many different shapes and laid in a variety of ways, they are capable of producing many beautiful effects.

In color also they afford a ground for artistic treatment, and may be stained, painted, oiled, or left untreated to take on the beautiful gray and silver tints that nature bestows in time by the action of the elements.

Shingles will continue in use, no doubt, because of their beauty, durability, economy and value in producing artistic effect.



DESIGN No. 211. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 211

SIZE OF STRUCTURE: Front, 22 ft., 6 in.; with staircase extension, 26 ft. Side, 44 ft., 6 in.; with veranda, 50 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft., 10 in.; Third Story, 7 ft., 6 in.

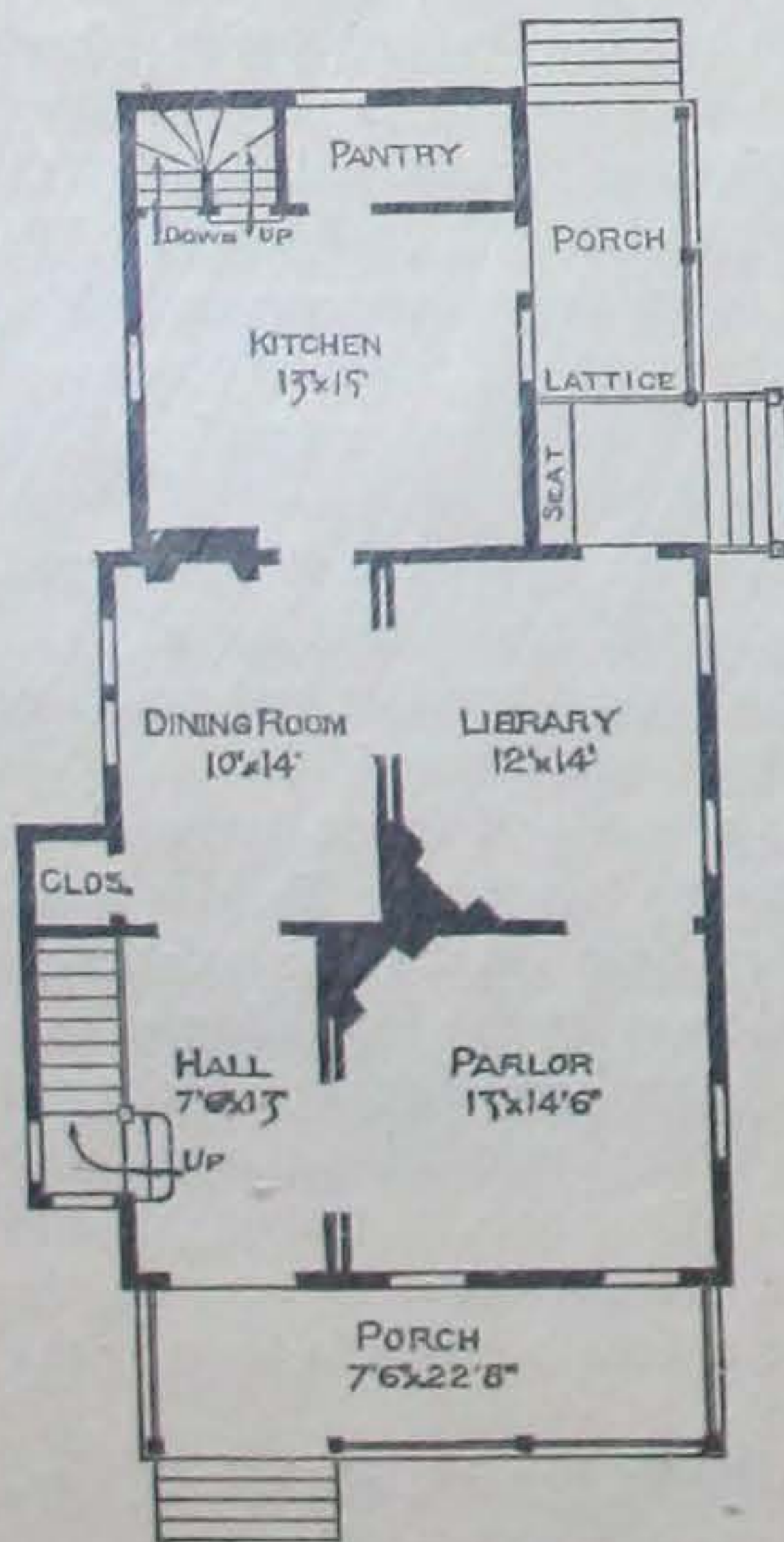
MATERIALS: Foundation, brick and stone; First Story, clapboards; Second Story, clapboards; Gables, shingles; Roof, shingles.

COST: \$2,600, complete, except heater and grates.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—Cellar under half of the house, with stairway from the kitchen. Two bed-rooms in the attic.

These plans present still another modification of that universally popular design Number 192. The exterior also is much the same, the principal change consisting in carrying up the stairway projection and in hipping the roof.



FIRST FLOOR. NO. 212

DESCRIPTION OF DESIGN NUMBER 212

SIZE OF STRUCTURE: Front, 23 ft., 8 in.; with stairway 27 ft., 2 in. Side, 46 ft., 2 in.

SIZE OF ROOMS: see floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft.; Third Story, 8 ft., 2 in.

MATERIALS: Foundation, brick and stone; First Story, clapboards; Second Story, clapboards; Gables, half timbers; Roof, shingles.

COST: \$3,700, complete, except heater and grates.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

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modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

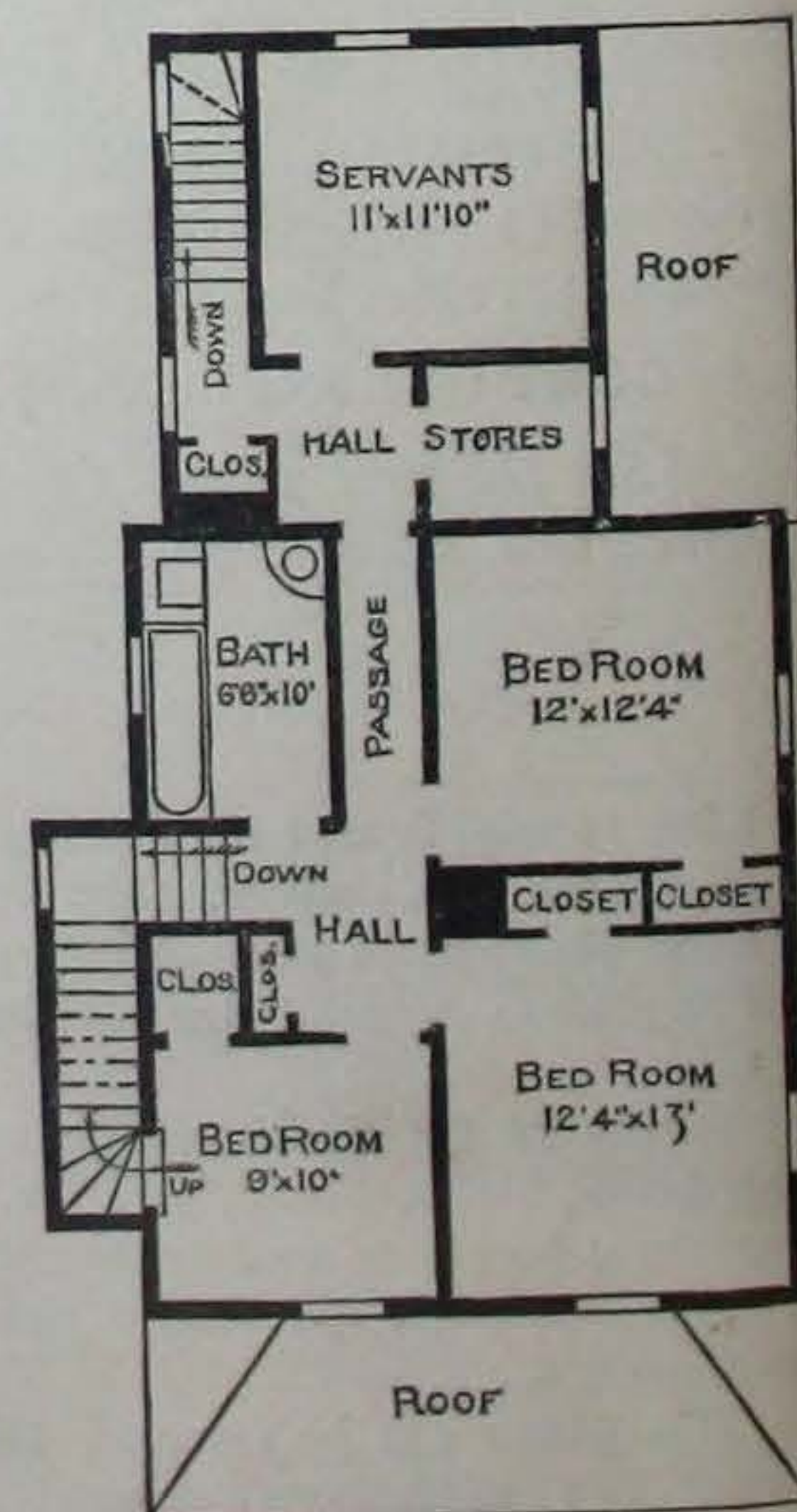
Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

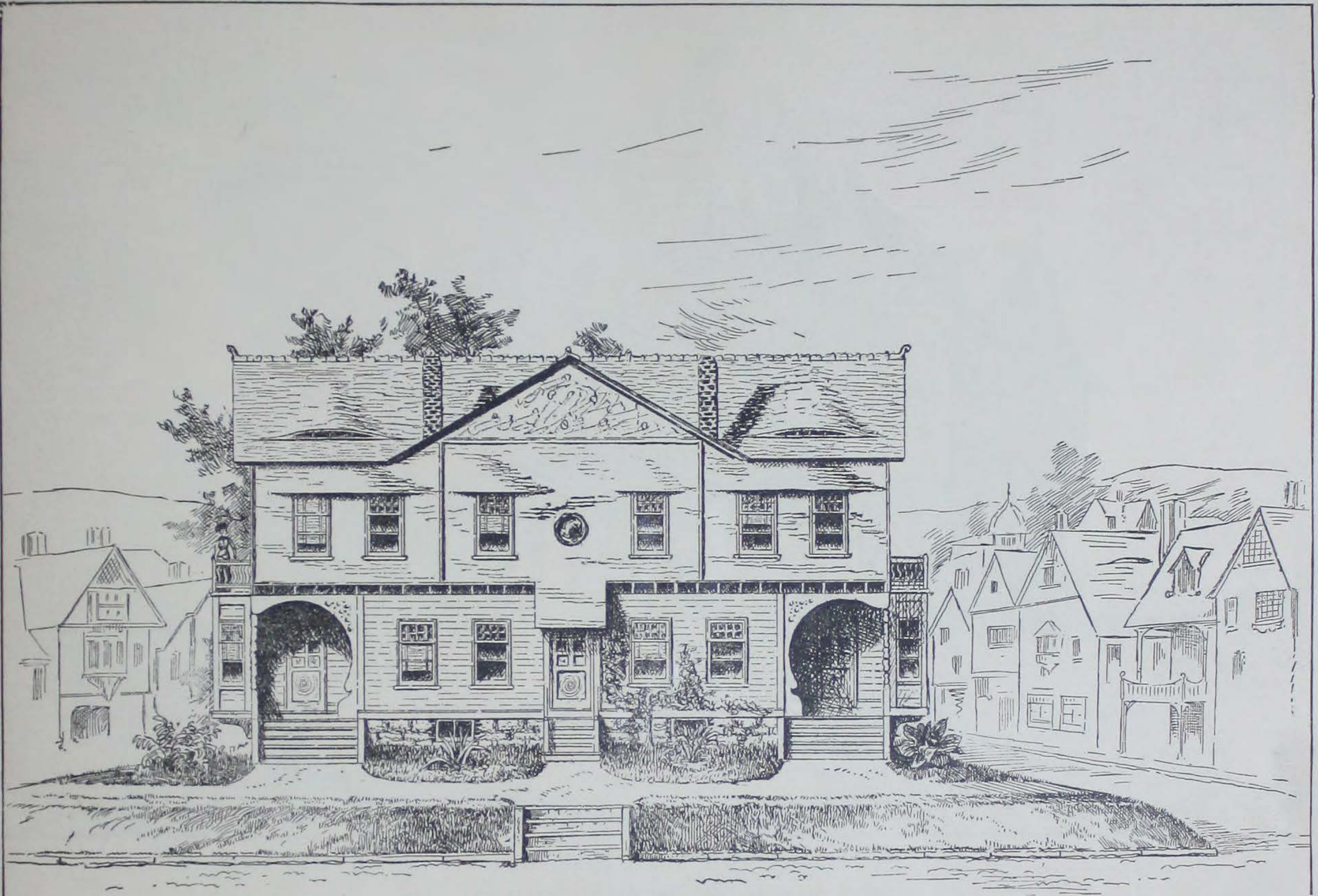
SPECIAL FEATURES.—The outside appearance is very much the same as shown by the perspective above. The floors are enlarged and contain bath-room, back stairs, back porch and an extra fireplace.

Cellar under the whole house. Cellar under part of the house only would reduce cost materially.

Two large bed-rooms and open garret in the attic. The bath-room pipes are carried up alongside the kitchen chimney, thus making sure that Jack Frost will not tamper with them. They are incased and can be examined at any time.



SECOND FLOOR. NO. 212



DESIGN No. 213. FRONT ELEVATION

DESCRIPTION OF DESIGN NUMBER 213

SIZE OF STRUCTURE: Front, 45 ft., 3 in. Side, 38 ft., 3 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft. 6 in.; Second Story, 9 ft.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles on front; Gables, cement (or shingle); Roof, shingles and tin.

COST: \$3,475, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

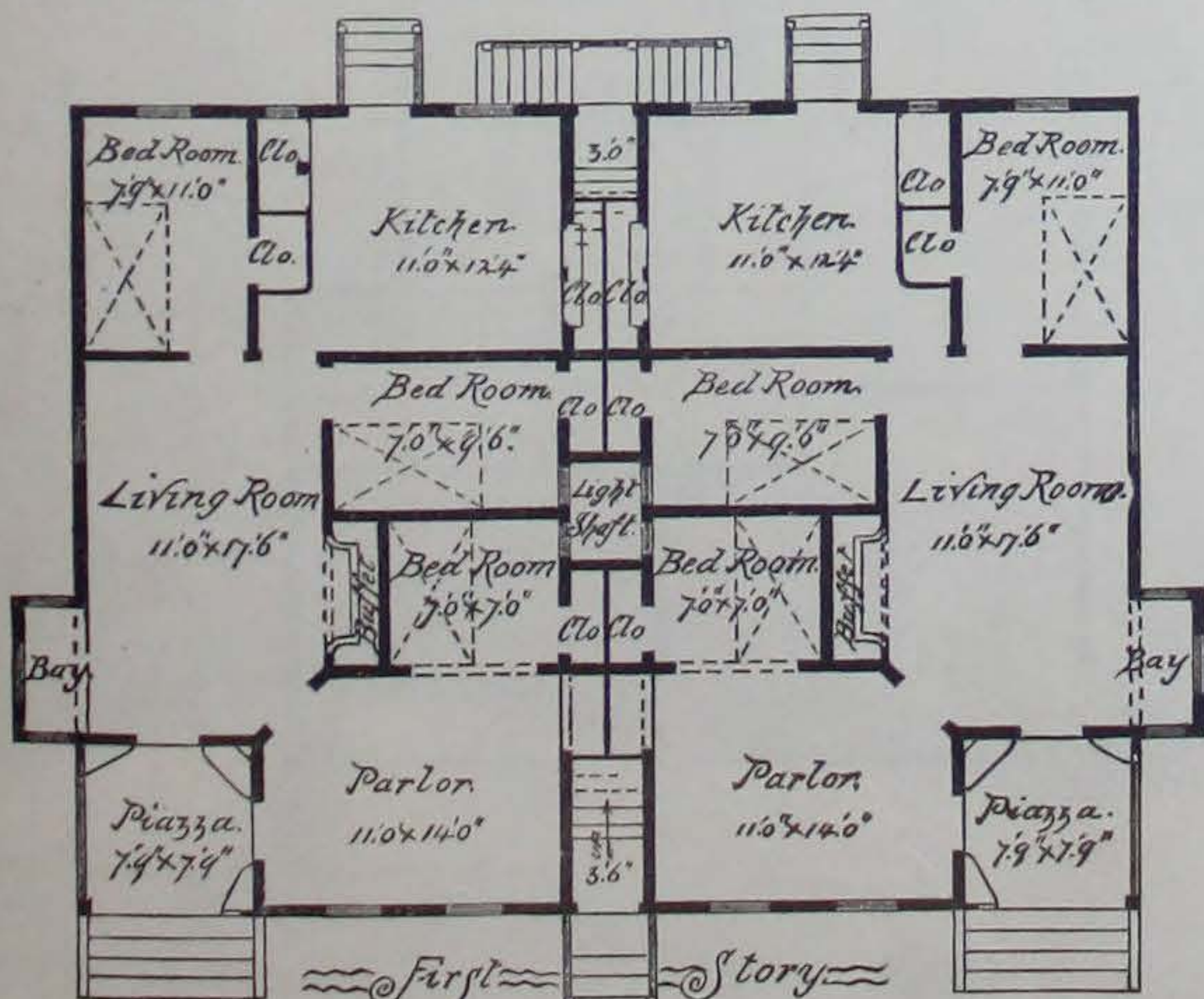
SPECIAL FEATURES.—This design is for a village tenement house, to accommodate four families, each "flat" or suite of apartments having six rooms of ample size.

Each first story "flat" has a separate entrance from a covered piazza to parlor or living room.

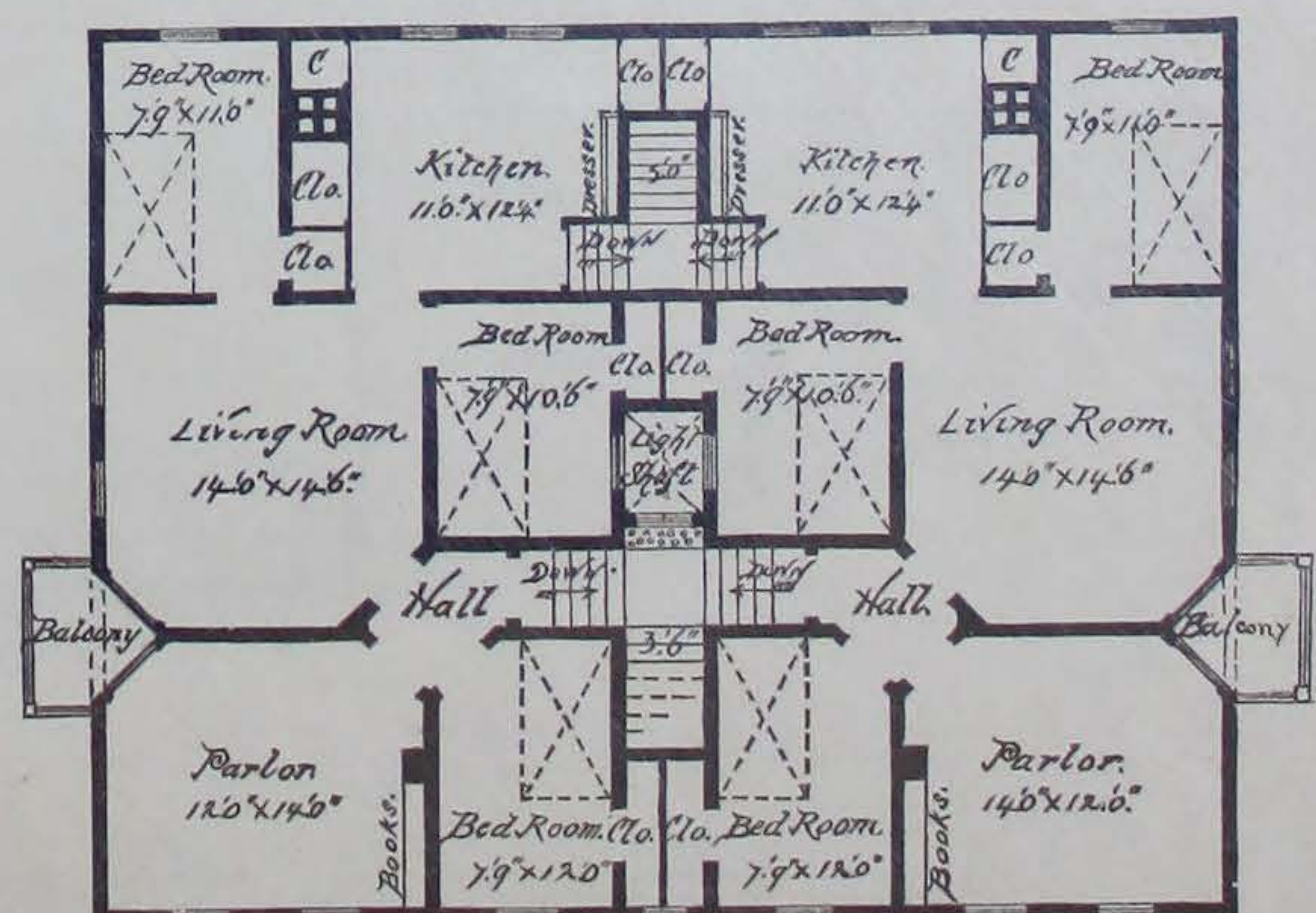
Each second story "flat" is entered by the front central stairway and has accommodations and conveniences quite equal to those on the first floor.

We commend this design to the attention of capitalists. Many families like flats and will rent them in preference to detached houses. By omitting the bay-window this house can be built on a 50-ft. lot and have a passage each side.

The house contains many little conveniences that are not ordinarily found in tenements.



FIRST FLOOR. NO. 213



SECOND FLOOR. NO. 213



DESIGN No. 214. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 214

SIZE OF STRUCTURE: Front, 33 ft., 6 in.; including veranda, 43 ft., 6 in. Side, 33 ft.; including veranda, 43 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 10 ft., 6 in.; Second Story, 9 ft., 6 in.; Third Story, 8 ft.

MATERIALS: Foundation, wood posts; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

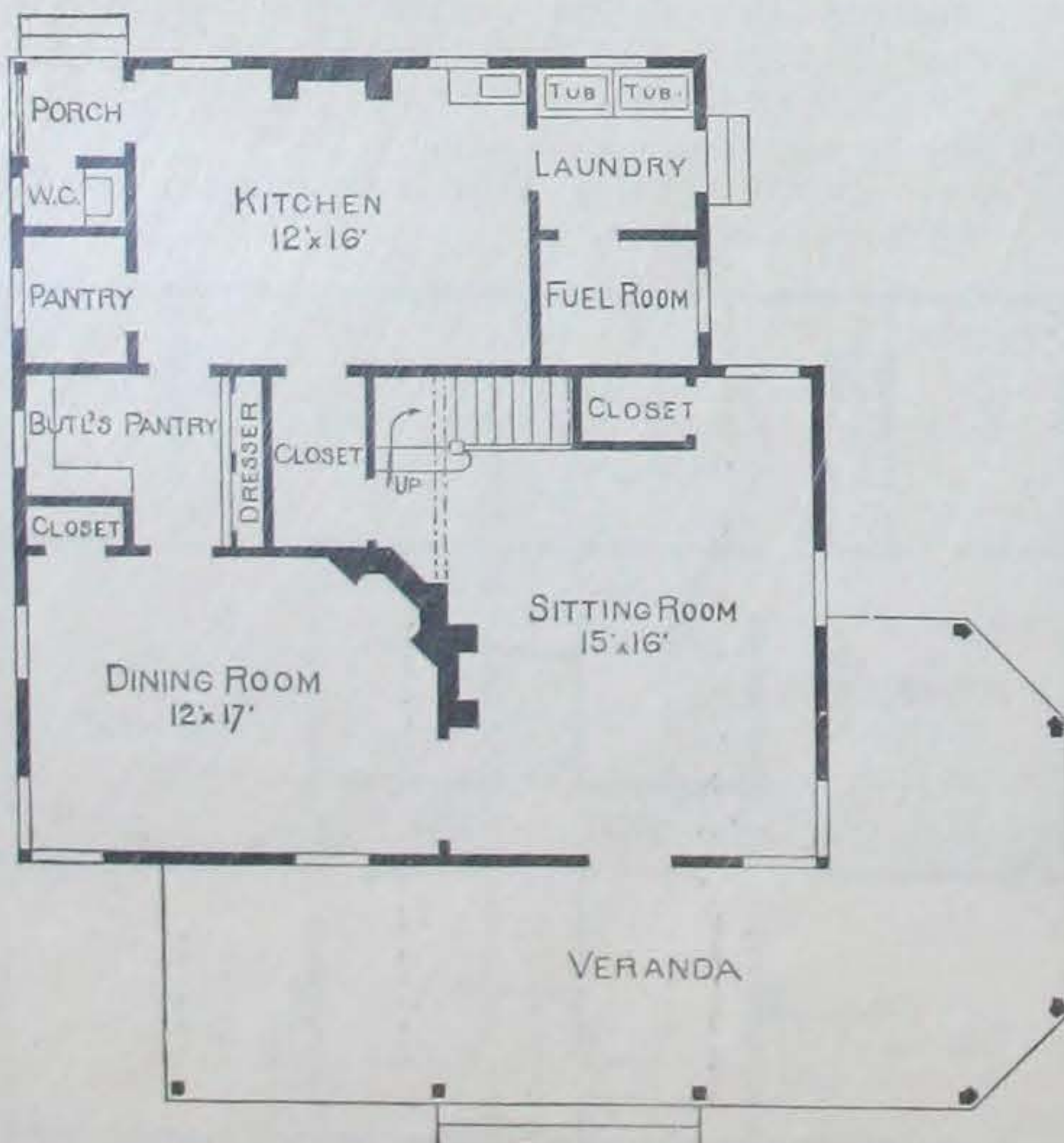
COST: \$3,500, complete, except grates.

SPECIAL FEATURES—This design was built at the seaside, but is quite as well adapted for other localities. The principal rooms

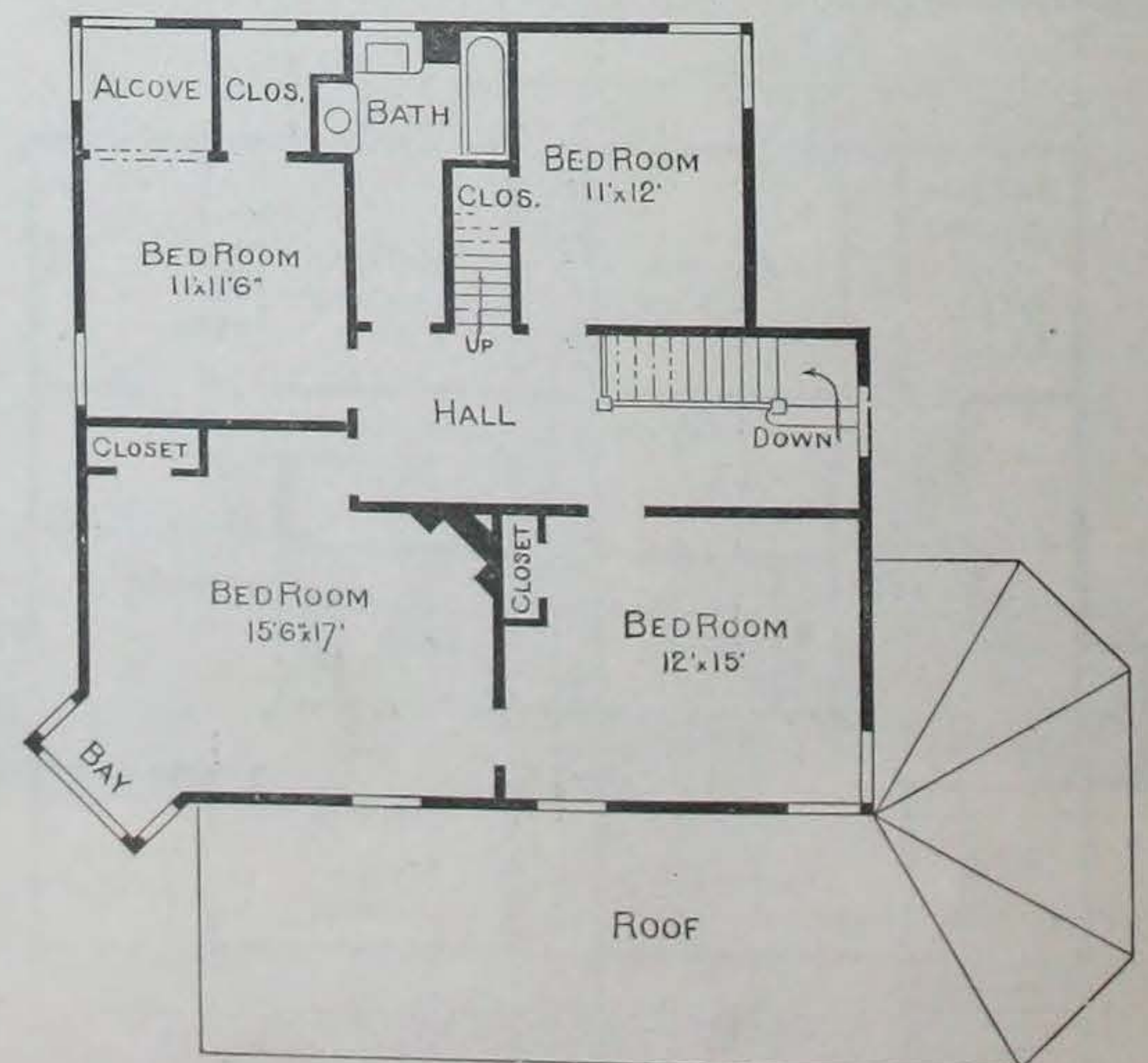
are large. There is a separate laundry, ample pantries, dressers and closets everywhere. The stair landing is so placed that servants can use it without obtruding in the front rooms. This does away with the necessity of back stairs.

There is a beautiful hanging bay in the second story. On five corners double windows are built (one on each side close up to the corner posts), and we find them delightful features. They afford a wide range of vision, just like a bay, leave better wall space for furniture, and give the exterior an appearance that may be called quite Queen Anne. In the attic there are three large bed-rooms.

There are open fireplaces of pressed brick and hardwood mantels in dining-room, sitting-room and the principal bed-room.



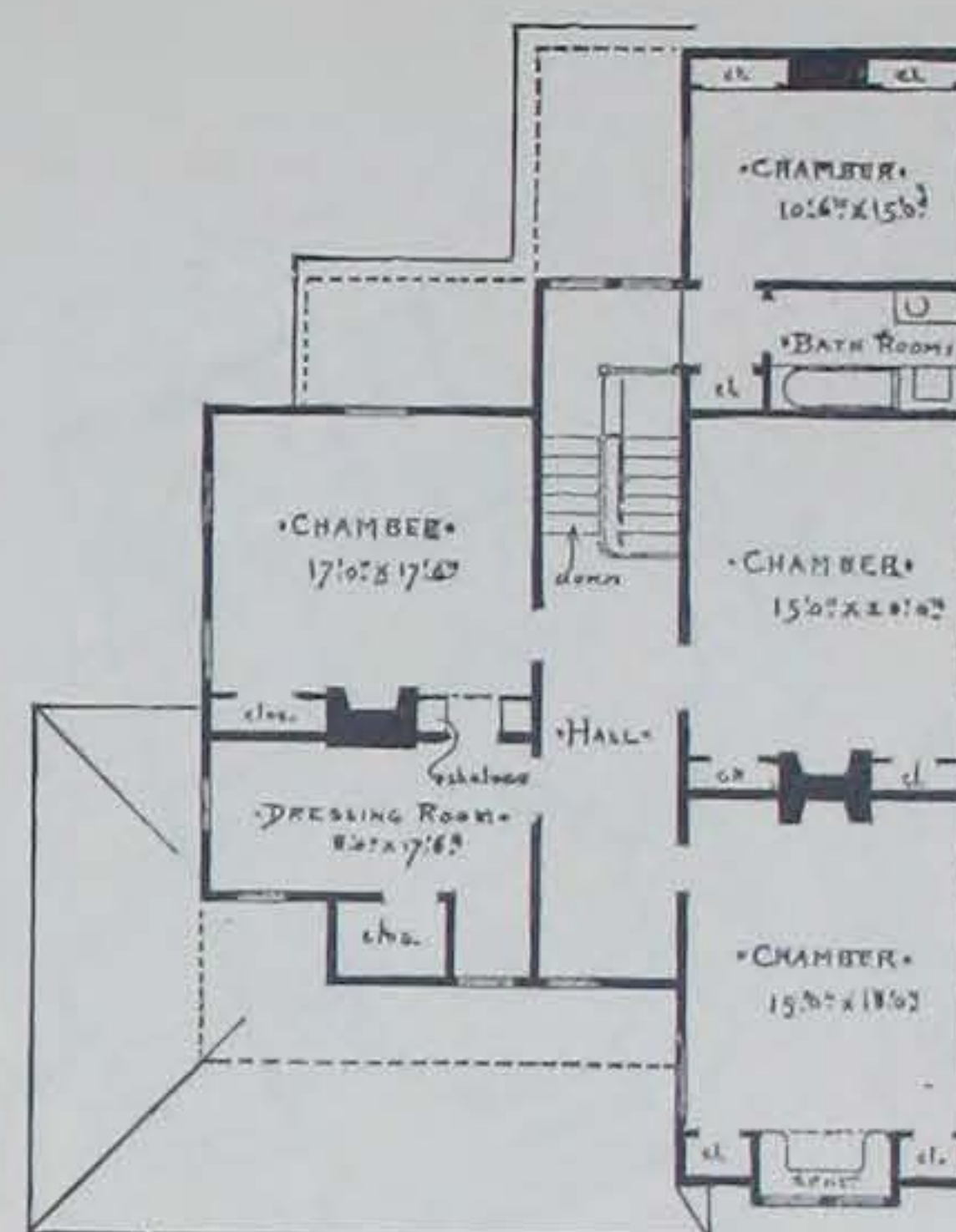
FIRST FLOOR, NO. 214



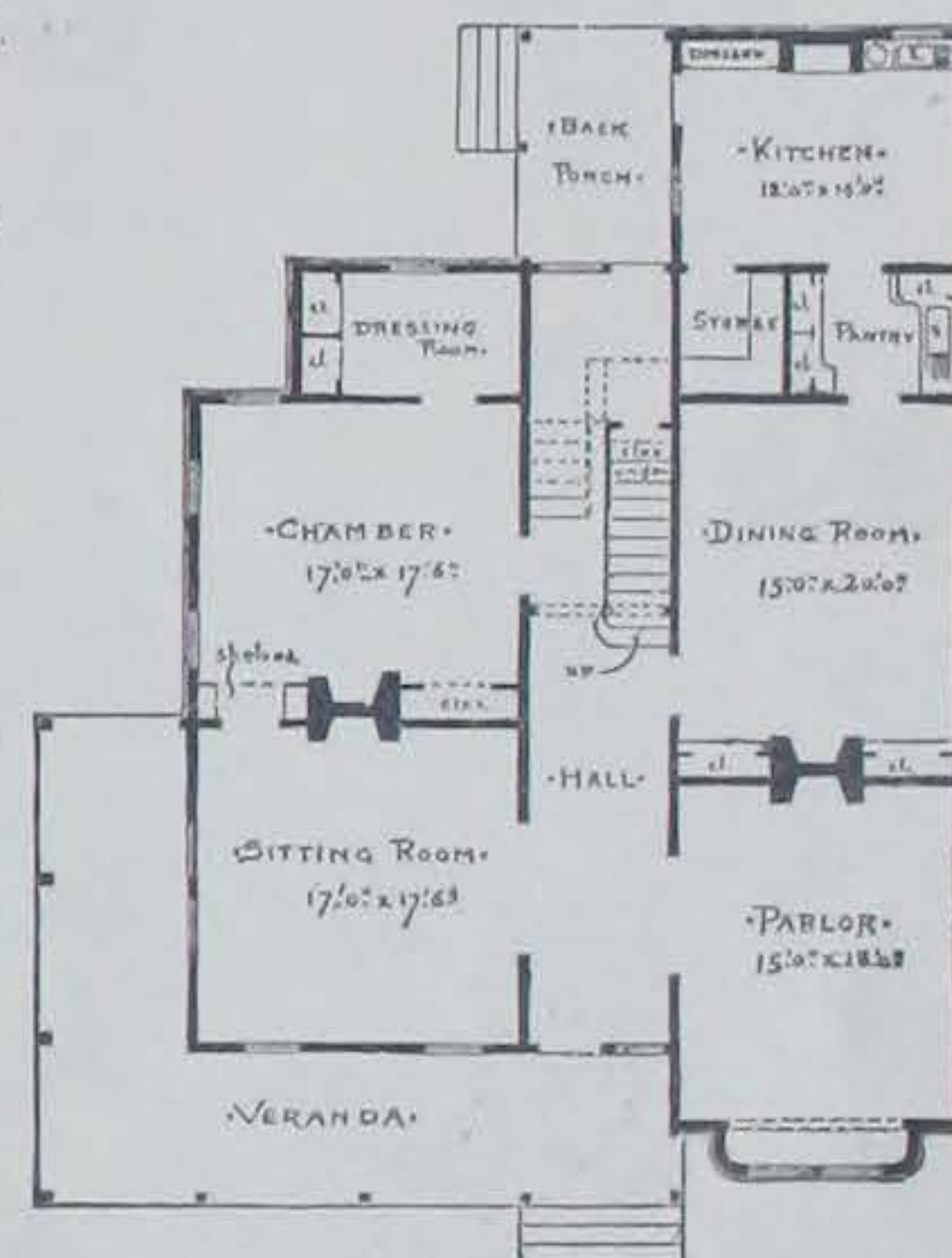
SECOND FLOOR, NO. 214



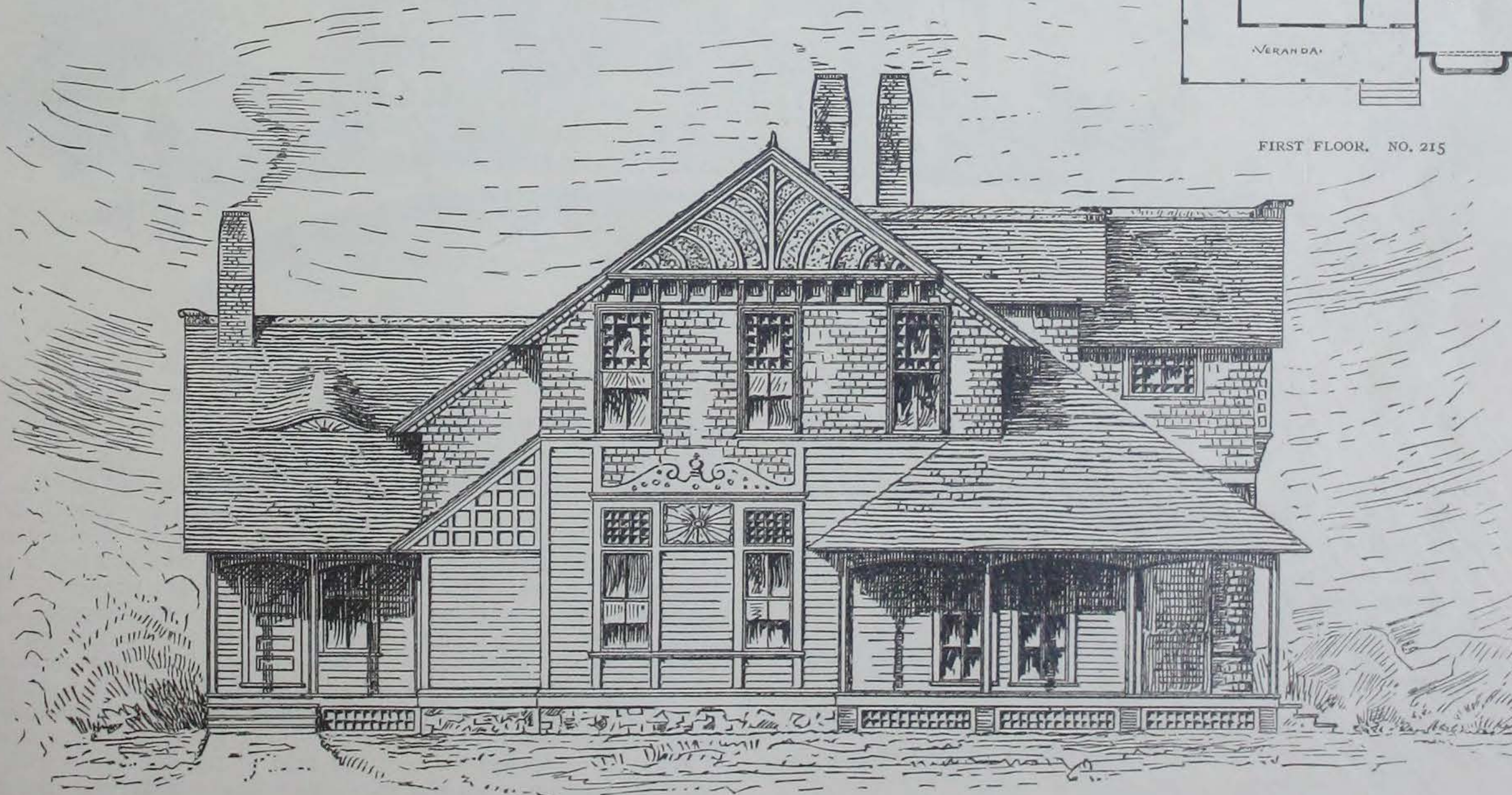
... FRONT ELEVATION ...



SECOND FLOOR, NO. 215



FIRST FLOOR, NO. 215



... SIDE ELEVATION ...

DESCRIPTION OF DESIGN NUMBER 215

SIZE OF STRUCTURE: Front, 49 ft., 6 in., including veranda.
Side, 62 ft., including veranda.

SIZE OF ROOMS: see floor plans.

HEIGHT OF STORIES: First Story, 13 ft.; Second Story, 10 ft.

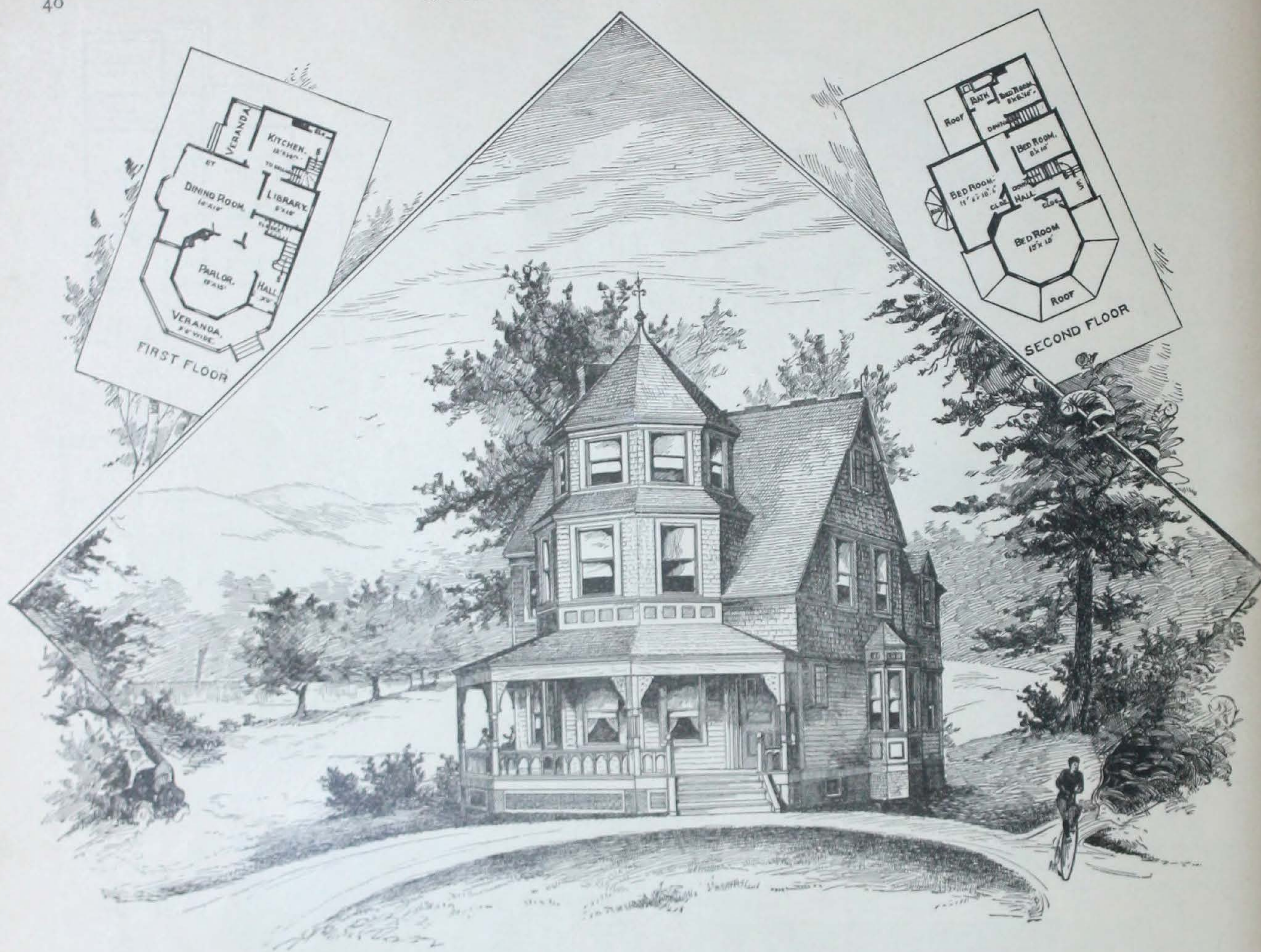
MATERIALS: Foundation, stone and brick piers; First Story, clapboards; Second Story, shingles; Gables, cement and timber; Roof, shingles.

COST: \$3,600, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—Designed for a Southern climate—large rooms and windows, high ceilings, open fireplaces, hall through the center, and a fine veranda.

The storage, pantry and closet room—in fact all of the accommodations are complete, and the exterior is considered one of the most artistic designs.



DESIGN No. 216. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 216

SIZE OF STRUCTURE: Front, 27 ft., 8 in.; Bay projects, 3 ft. Side, 43 ft., 2 in. Veranda projects, 5 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft., 3 in.; Second Story, 8 ft., 9 in.; Third Story, 8 ft.

MATERIALS: Foundation, brick and stone; First Story, clapboards; Second Story, shingled; Gables, shingled; Roof, shingles.

COST: \$2,550, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Cellar under rear part of the house. Fine large rooms. A notably handsome veranda and porch. Stairways and hall well lighted. Good closet room. Bath and back stairway.

In the attic story there is one small bed-room and one fine large room; the latter, by the way, is large enough for a small billiard table, and is a good place of banishment for the gentlemen who smoke. The fragrance of the weed is thus confined to the top of the house or escapes to the open air through the windows. When delicate ladies assure us that they "like the fragrance of a good cigar," it is well to credit them with this mental reservation: they do *not* like the dead odor to "hang around" for days, in curtains, carpets and upholstery. A secluded room like this is desirable for many purposes. It makes a fine study for student or minister; a good studio for an artist; a play-room for children; a sewing-room or a "growlery" where the man of the house can look over the bills and figure up the expenses without disturbing the other inmates with his ejaculations.

A veranda should be low and broad so that it will be shady, and thus answer the purpose for which it is designed. The posts should be spaced a good distance apart so that they will not obstruct the view.

Many verandas, because they are not designed according to the above principles, instead of appearing charming and seductive retreats, are wholly uninviting in appearance and actually uncomfortable as a place of resort.

The careful observer will note that provision for convenience and comfort are first considered in designing modern houses; beauty is an after consideration. It is a fact, however, generally speaking, that the design which provides the most comfort is the one also which presents the finest appearance.

DESCRIPTION OF DESIGN NUMBER 217

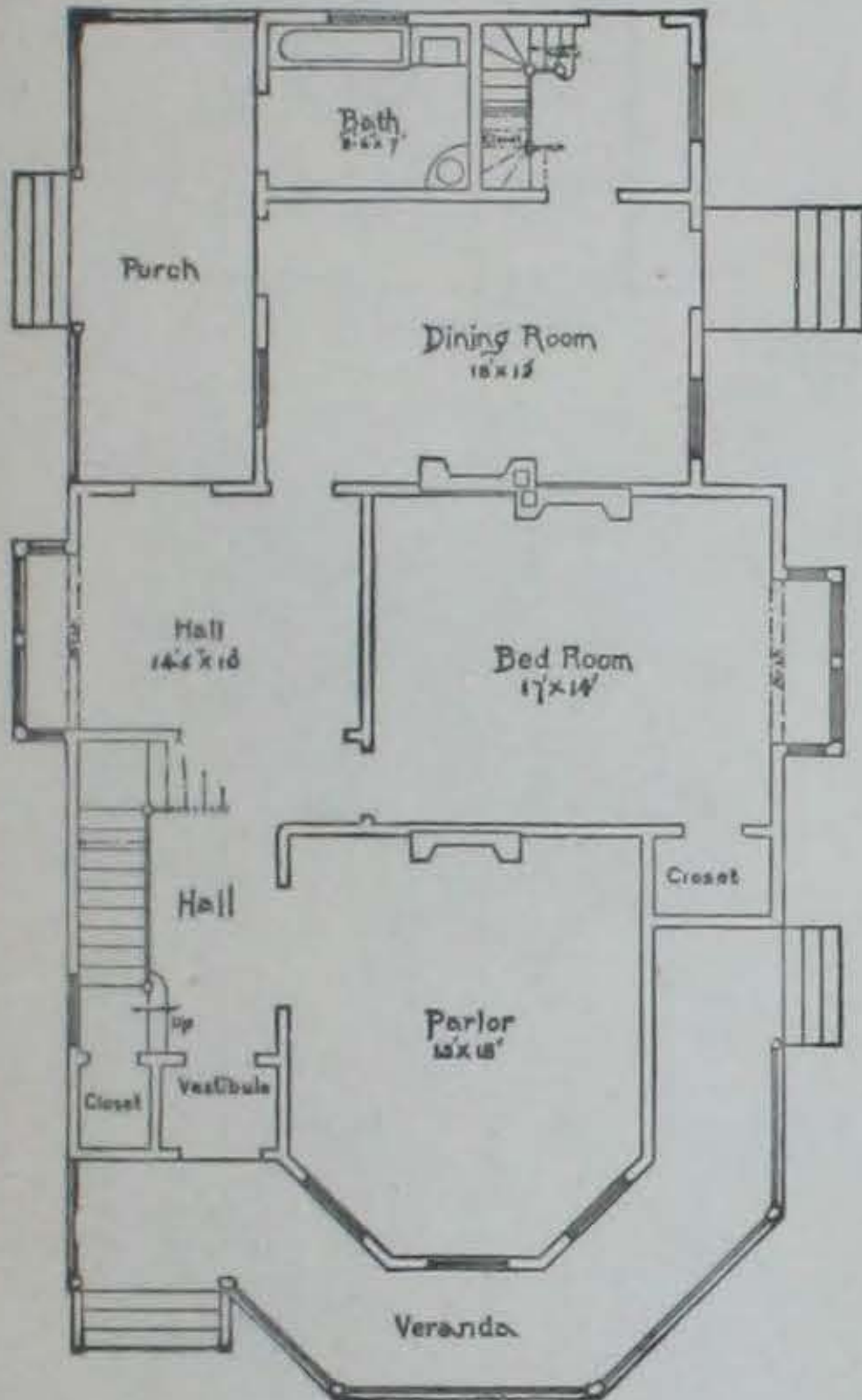
SIZE OF STRUCTURE: Front, 29 ft., 2 in., not including bay-window. Side, 53 ft., 8 in., not including veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 11 ft., 6 in.; Second Story, 11 ft.; Third Story, 8 ft.

MATERIALS: Foundation, brick piers.

COST: \$3,200, complete.



FIRST FLOOR, NO. 217

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—This is an enlarged modification of the preceding design, adapted for the South. There is no cellar and the kitchen is detached. The ceilings are high.

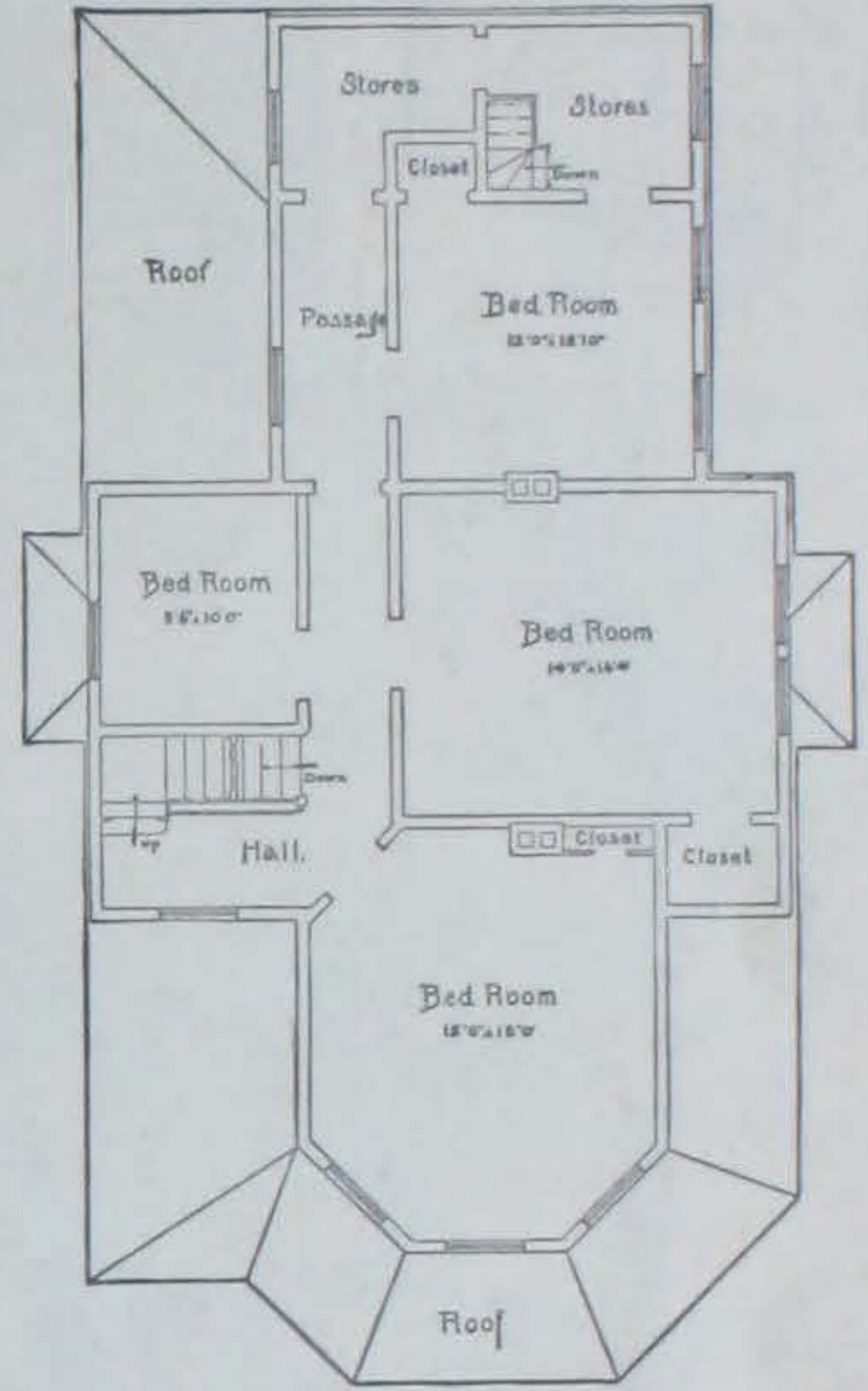
The room marked Hall (an old English designation), is a reception-room or sitting-room.

If desired, the present bed-room could be used as the dining-room and the dining-room as the kitchen; the bath-room would then be placed in the second story and the space thus vacated would make a fine pantry. The kitchen and dining-room would then be connected.

If this house is built on a lot that slopes toward the rear a basement kitchen can be made under the dining-room.

Open fireplaces throughout first story.

In Central Alabama, where this house was built, it cost only \$2,500.



SECOND FLOOR, NO. 217

DESCRIPTION OF DESIGN NUMBER 218

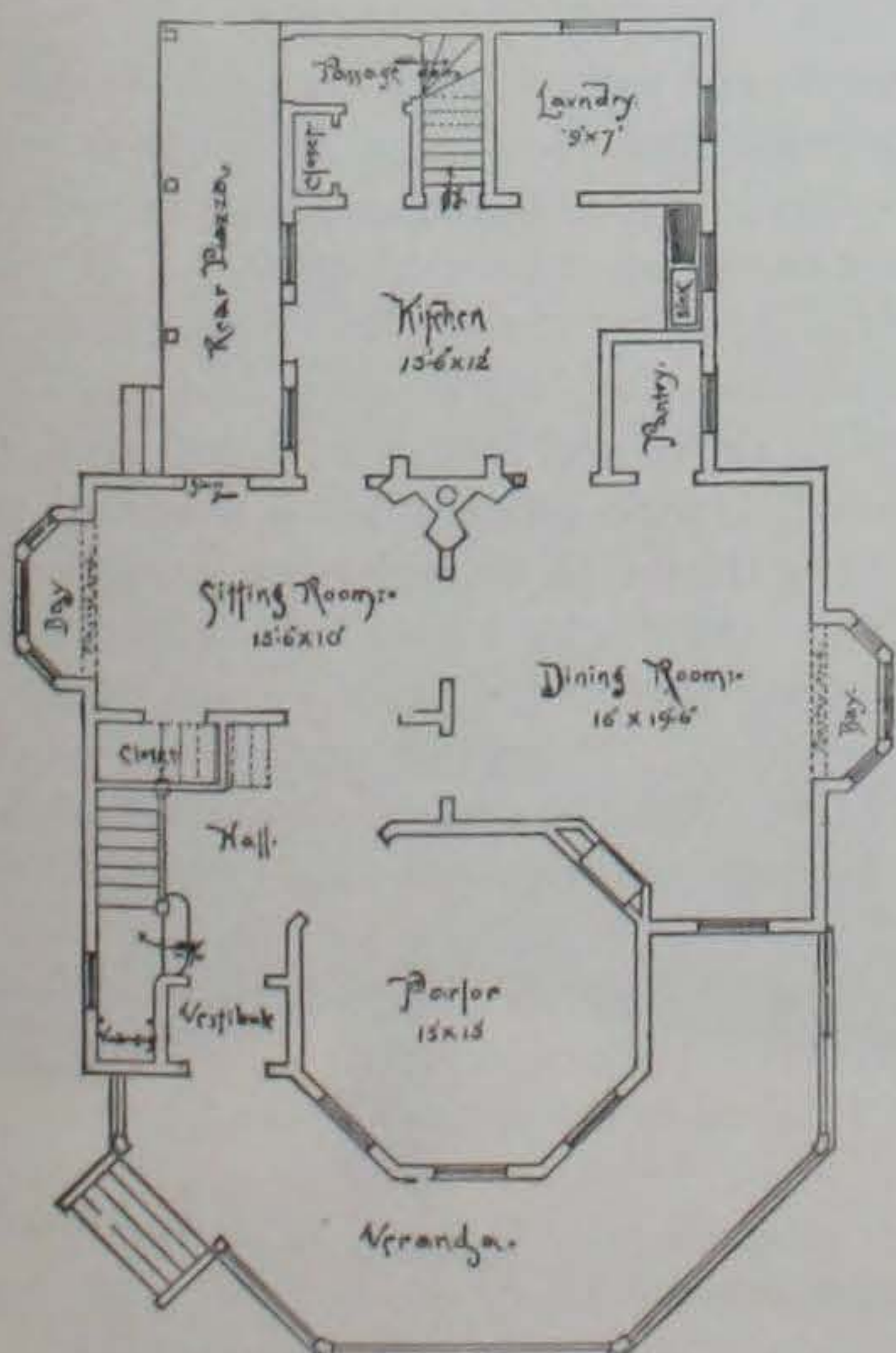
SIZE OF STRUCTURE: Front, 32 ft., 8 in.; Bays project, 3 ft. each. Side, 51 ft., 8 in.; Veranda projects, 7 ft., 10 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft. 6 in.; First Story, 9 ft., 6 in.; Second Story, 8 ft., 9 in.; Third Story, 8 ft.

MATERIALS: Foundation, brick and stone.

COST: \$3,500, complete, except furnace.



FIRST FLOOR, NO. 218

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed

enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—This is a still larger modification of the popular design Number 216. The exterior is much the same.

Cellar under the whole house.

Open fireplaces in the sitting-room, dining-room and the bedroom over the dining-room. Large openings connect sitting-room, dining-room and hall.

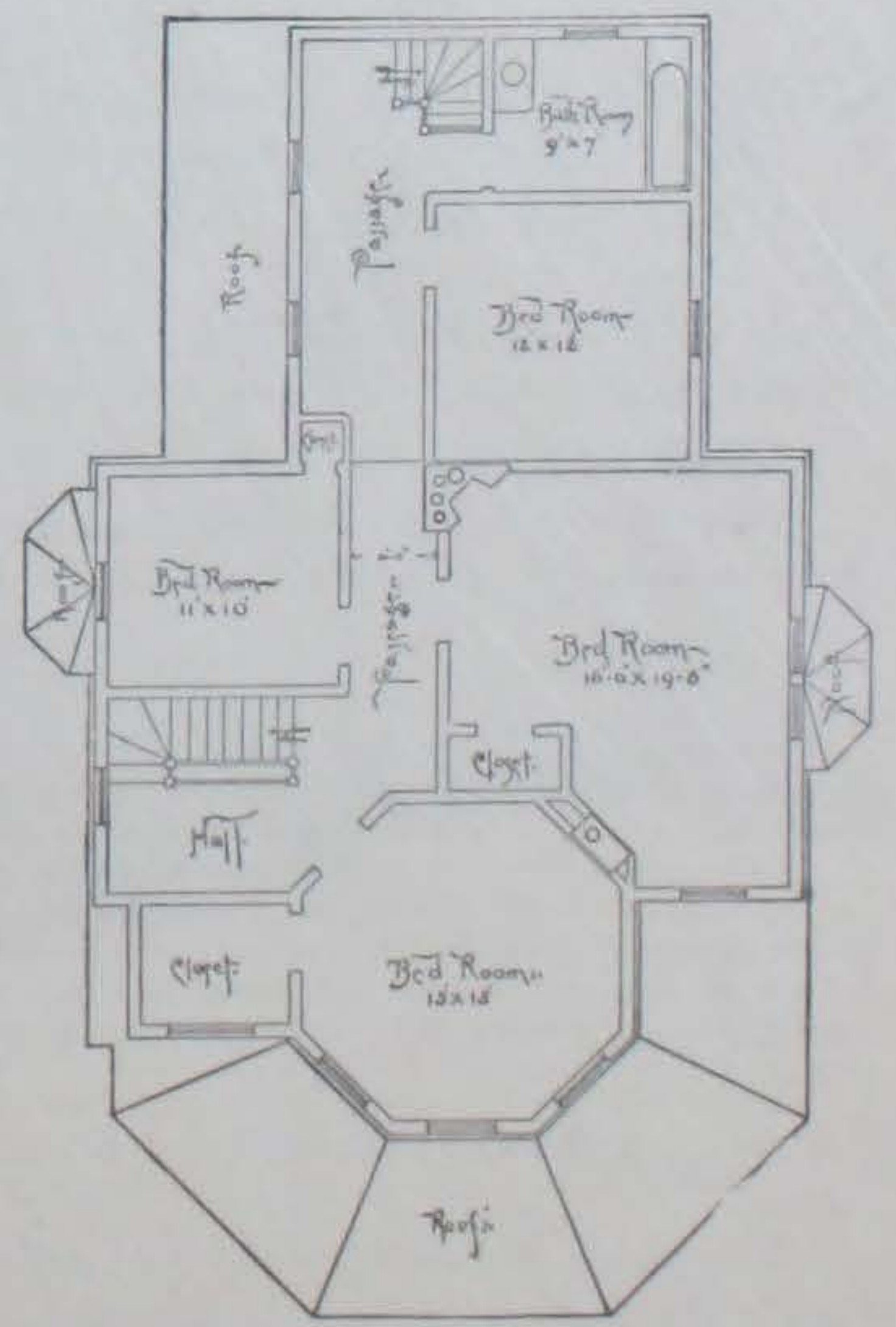
A glazed door opens from the sitting-room to the rear piazza.

A closet is obtained off the first stair platform for hats, cloaks, &c.

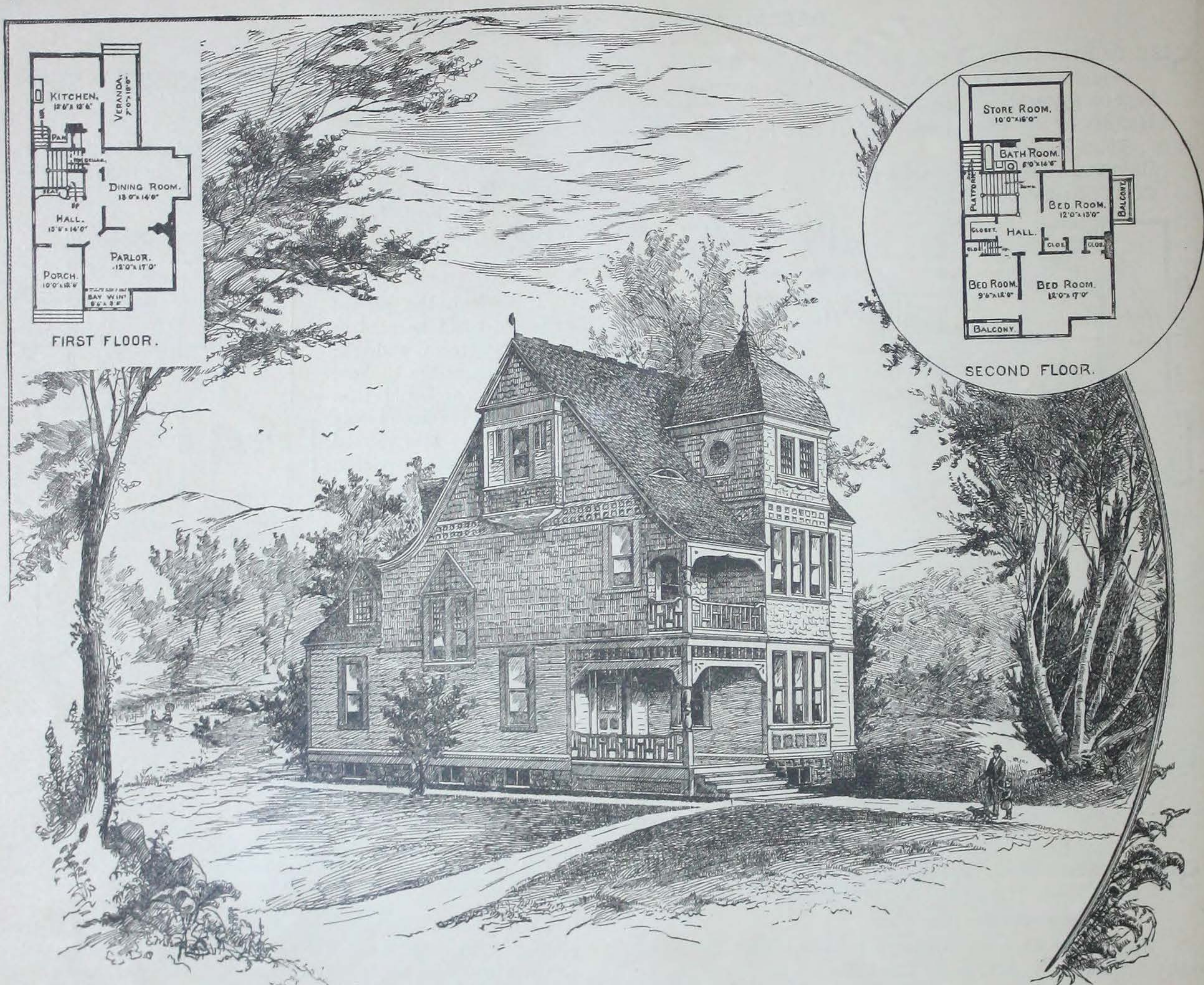
The parlor chimney has no fireplace, as it is intended to use a furnace for heating. Furnace is not included in estimate of cost, however.

The octagon tower is kept in both of the designs on this page, like Number 216. The way the veranda is arranged will give a shady nook at any time of the day.

The liberal supply of bay-windows is a feature that will be appreciated by everybody.



SECOND FLOOR, NO. 218



DESIGN No. 219. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 219

SIZE OF STRUCTURE: Front, 28 ft. Side, 49 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft., 6 in.; Second Story, 9 ft.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$3,550, complete, except heater.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

SPECIAL FEATURES.—The cellar extends under the whole house.

A spacious and well-lighted hall with a handsome and easy staircase at the further end serves as a pleasant sitting-room.

The parlor and dining-room are connected by a wide opening for a curtain and each is materially enlarged by a rectangular bay-window. A wide opening is also provided between dining-room and hall so that the whole can be thrown open when desired.

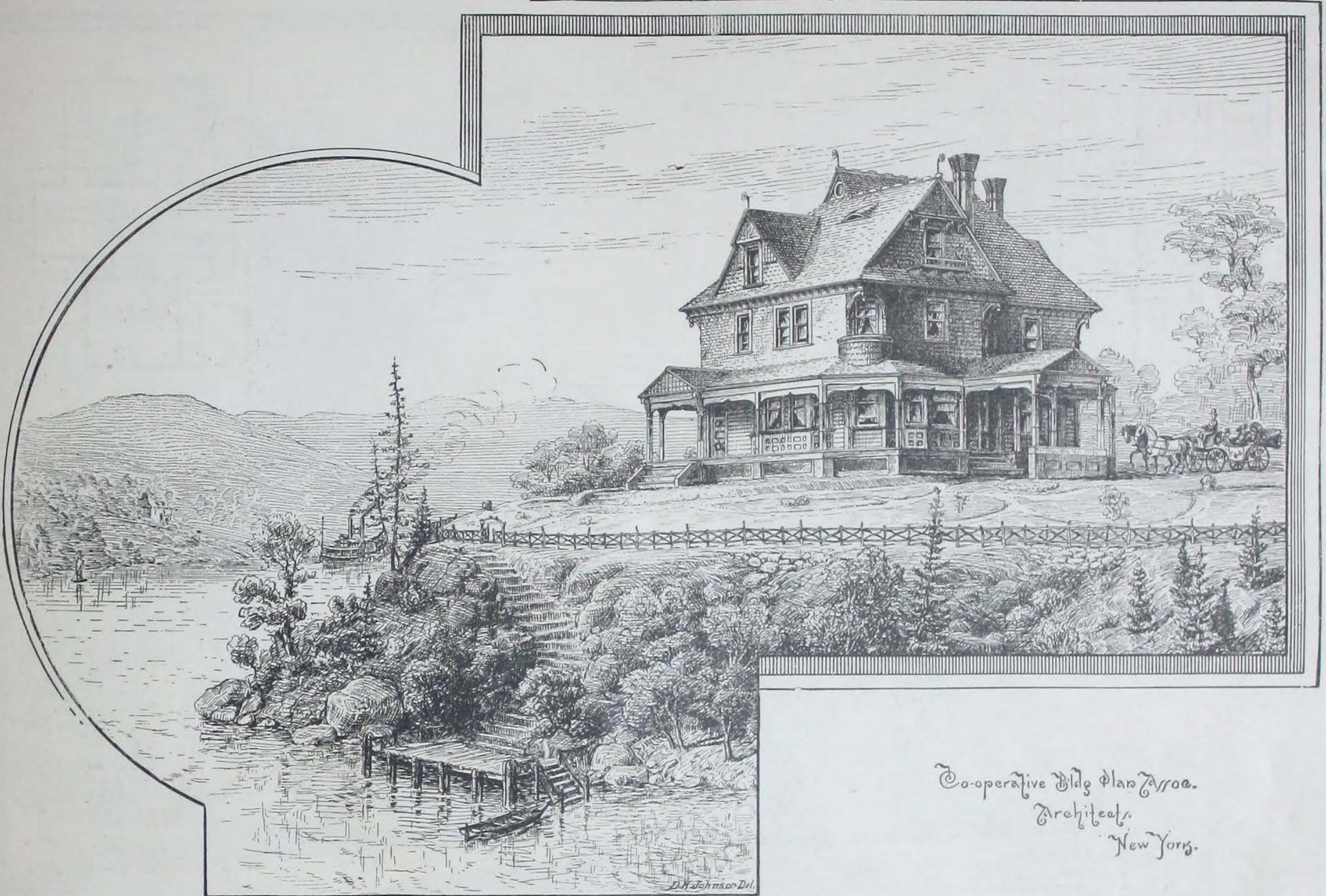
The staircase, of unique design in hardwood, beautifies the hall, and two stained glass windows placed at the landing, half way up, light the stairway and hall, both above and below, with soft tints.

The dining-room is connected with kitchen by a rear hall or butler's pantry shut off from the front hall though connecting with it. This rear hall is lighted and connects by a slide with the kitchen pantry. A low window extending to the floor enables one to step from dining-room to the rear veranda. From the kitchen a flight of steps leads to the landing of the main staircase, providing access to the second story from kitchen without passing through the front hall.

In the second story are three bed-rooms, large bath-room well fitted up, a store-room and liberal supply of closets.

Two good rooms can be finished in the attic if desired, to which a stairway is provided.

The house is arranged for heating by furnace, in conjunction with which the open fireplaces can be used, which furnish at the same time the best of ventilation. Wood mantels are provided.



Co-operative Bldg Plan Assoc.
Architects.
New York.

DESIGN No. 220. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 220

SIZE OF STRUCTURE: Front, 34 ft., 10 in.; including veranda and *porte-cochère*, 57 ft. Side, 42 ft., 6 in.; including veranda, 47 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 10 ft.; Second Story, 9 ft.; Third Story, 7 ft., 6 in.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Gables, shingled and paneled; Roof, shingles.

COST: \$3,900, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—The cellar extends under the whole house. The laundry is in the cellar and is well lighted.

In the attic there are two bed-rooms and space for one more, still leaving abundant storage room.

The long veranda and the fine *porte-cochère* are handsome as well as convenient features.

The arrangement of rooms is very complete and cannot be much improved. For a family in the country who wish to entertain a good deal this is a perfect design; it is so ample in all the accommodations that please guests. Its appearance is imposing; every one seeing it will be sure to remember it as a fine country seat.

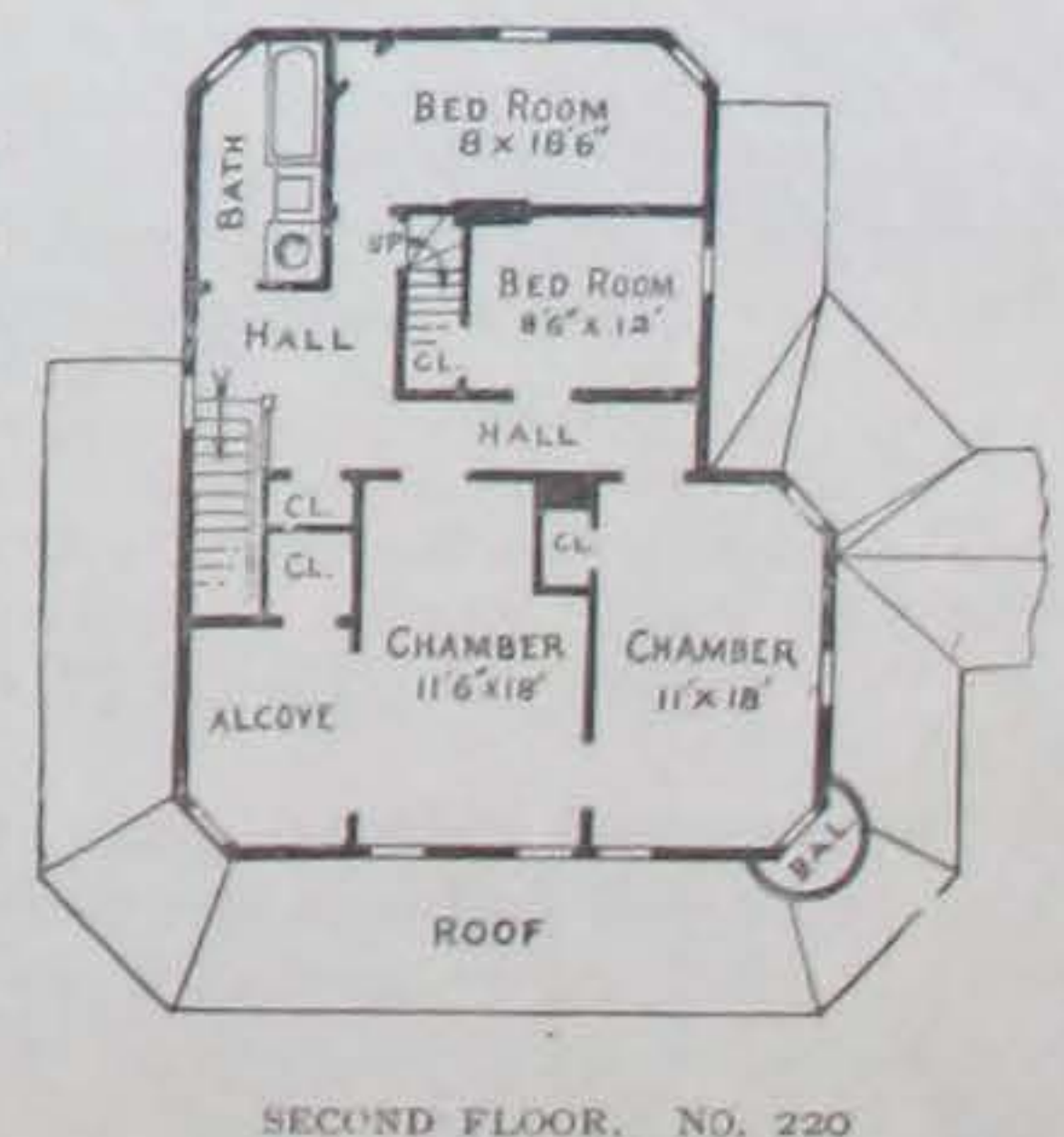
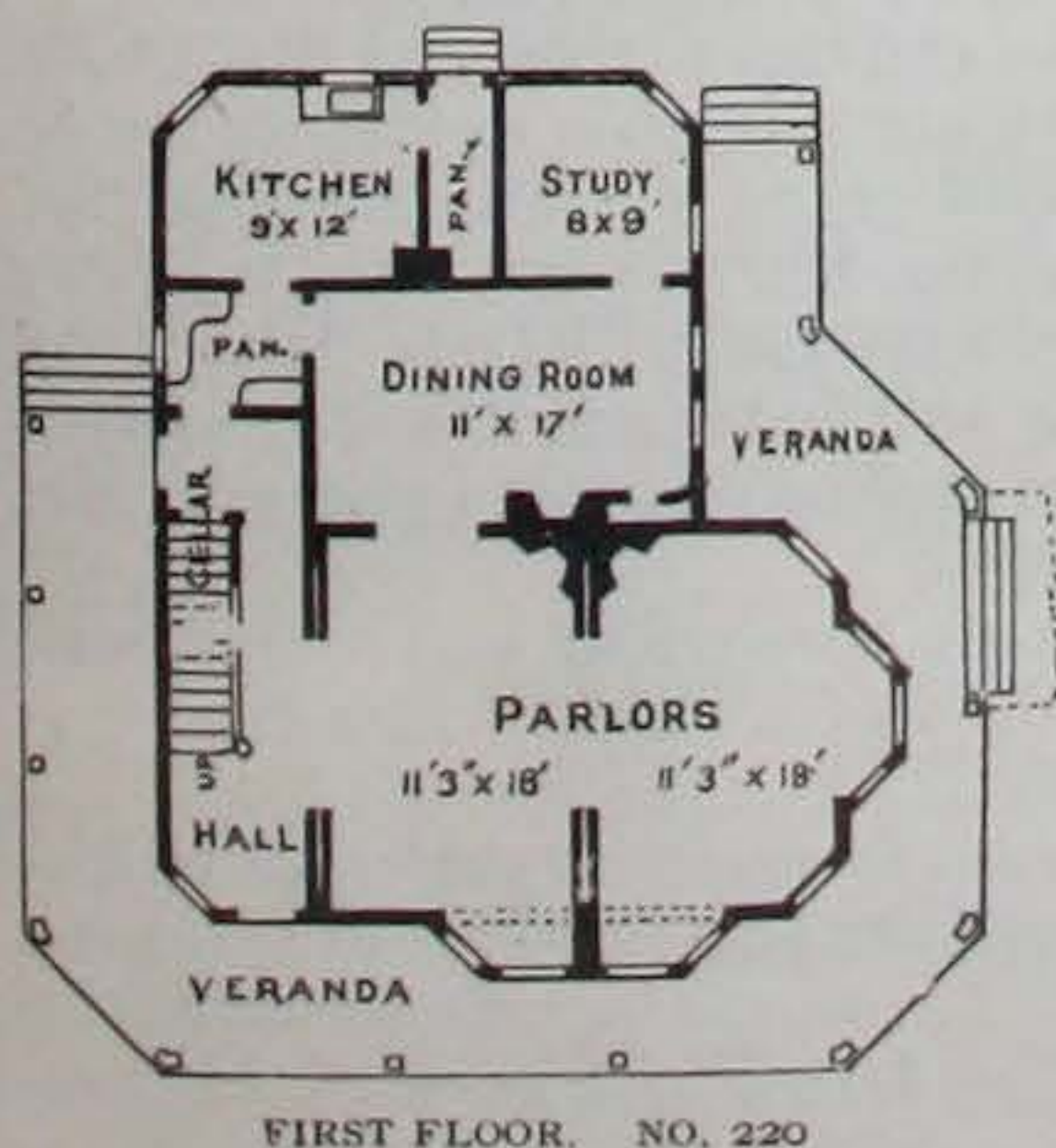
The style is striking, yet quiet and in thorough good taste. This is a design that will be approved by the next generation, however much cultivation they may boast. The generous and large-minded man builds for posterity as much as for himself.

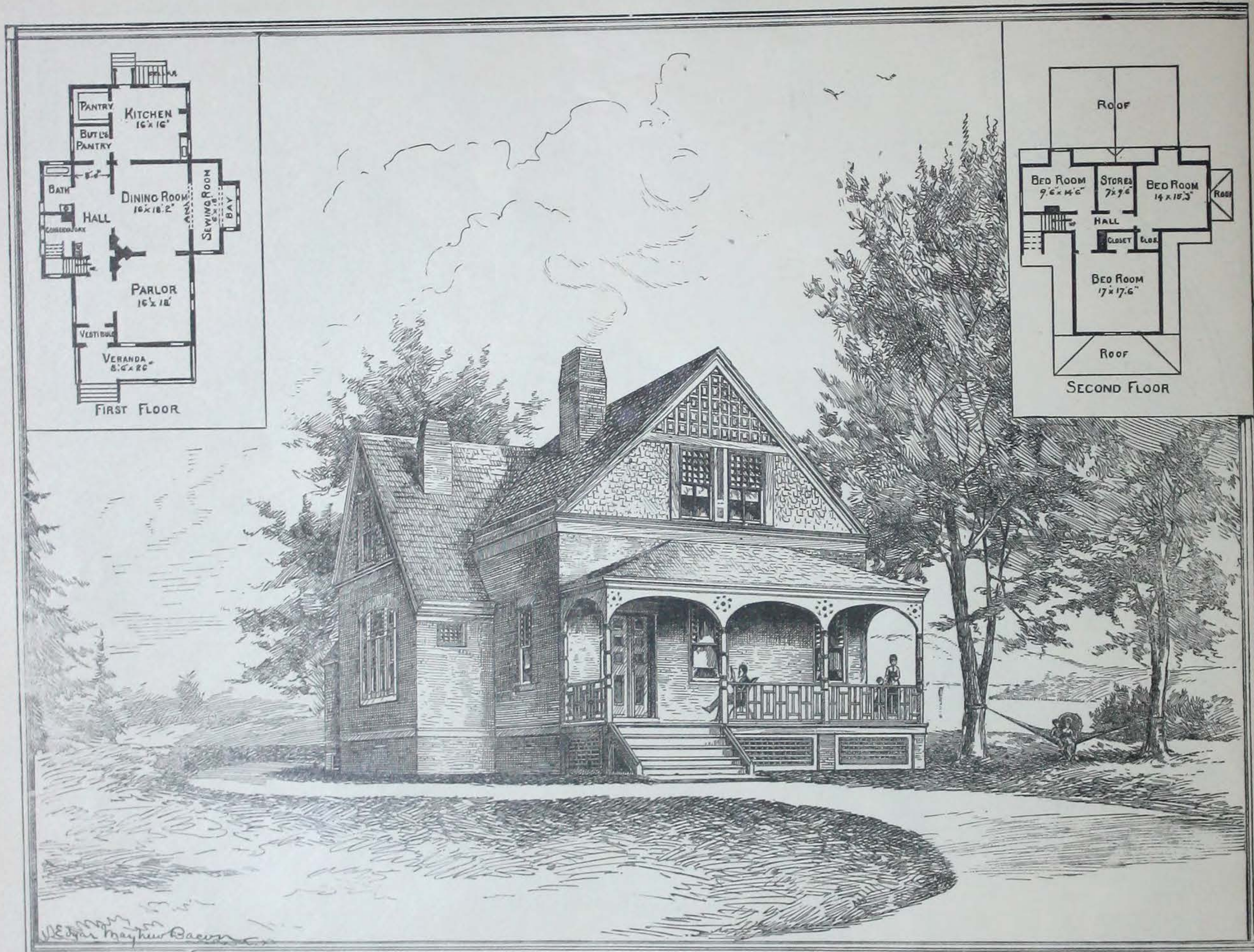
This house is best placed in a prominent and commanding location, because it affords fine outlooks in all directions.

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

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DESIGN No. 221. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 221

SIZE OF STRUCTURE: Front, 26 ft., 6 in.; extreme width, including bay-window, 43 ft. Side, 63 ft., including veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 11 ft.; Second Story, 9 ft., 6 in.

MATERIALS: Foundation, stone and brick; First Story, brick; Second Story, brick, up to cornice; Gables, shingled and paneled; Roof, shingles.

COST: \$3,500, complete, except kitchen range.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

SPECIAL FEATURES.—This is a good Southern house, but is well adapted for any climate.

Cellar under the kitchen only, and is entered from the outside.

This design recommends itself at the first glance to one who wants plenty of room on the ground floor. The main house is built of brick up to the roof line, and the kitchen extension is built of wood.

The long and wide hall is an attractive feature for our Southern clients, who will find this just the place to keep cool in hot weather. From the hall we enter parlor or dining-room through large openings, in which hang curtains or folding doors. The parlor is separated from the dining-room by large sliding doors. A curtained

archway, ten feet wide, makes the alcove, which we call sewing-room, with its great bay-window, a part of the dining-room or a separate apartment at will. A single chimney gives an open fire-place in parlor, dining-room and hall.

On the other side of the hall is the bath-room and conservatory, and in either or both of these rooms a small stove can be used in very cold weather. The conservatory is a charming place for winter gardening. The large arched window, shown in the view above, with the upper sashes glazed with stained glass, is one of the beautiful features.

The kitchen has its own chimney, is well lighted and ventilated, and has a very large and generous closet. There is access from it to the dining-room direct, or through the butler's pantry.

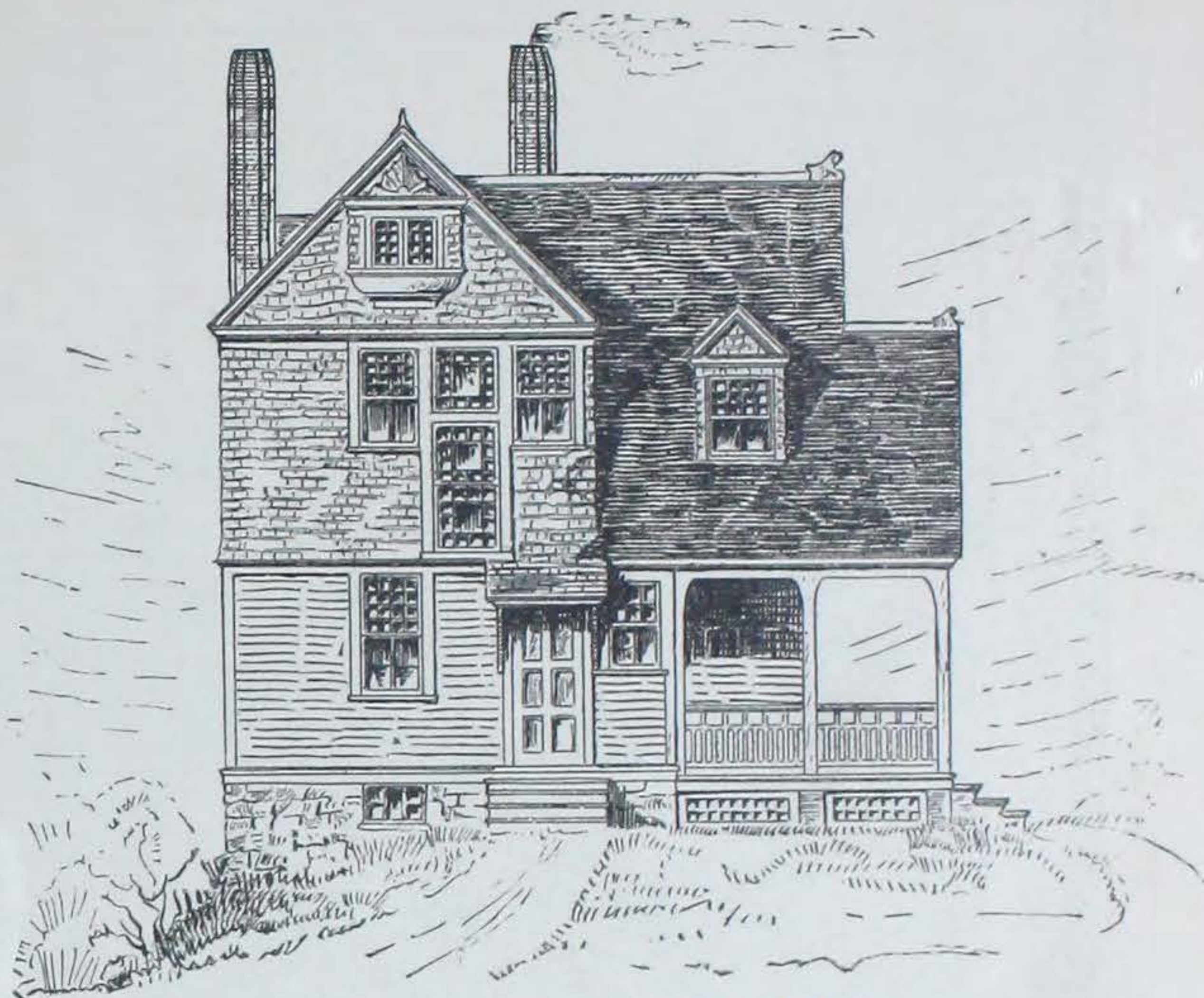
In a great many houses where the ceilings are very high, as they are in this, going "up stairs" involves considerable exertion, but in this design the case is different; beside going directly through the conservatory (it is not enclosed) among the flowers, this stairway has two platforms, making the ascent very easy. It is lighted by the large window shown on the side and by a small window over the first platform. The stained glass diffuses a soft light over the whole of this part of the house.

On the second or attic floor there are three fine bed-rooms, well lighted, and a large store-room, which could be used as a sleeping-room at a "pinch."

The outside appearance of the house is quiet, elegant and home-like, the wide veranda forming an out-door sitting-room in summer. If desired, the veranda could be carried around the side as far as the staircase wall. The roofs are shingled, but could be slated if preferred.



DESIGN No. 222. FRONT ELEVATION



DESIGN No. 222. SIDE ELEVATION

DESCRIPTION OF DESIGN NUMBER 222

SIZE OF STRUCTURE: Front, 35 ft. Side, 26 ft., not including veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft.; Second Story, 8 ft., 6 in.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Gables, shingles in waved lines; Roof, shingles.

COST: \$2,750, complete, except grates or heater.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

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This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—A good cellar under the whole house.

The attention bestowed upon the design and construction of staircases in our modern houses, make them easy of ascent and beautiful to the eye. In all well-arranged modern houses, as in this, are given a prominent and important place.

There is a side entrance and a back hall, giving access to the front door from the kitchen, without passing through another room.

The bath-room is sufficiently heated by the kitchen flue. The water pipes, being carried up against the chimney, are insured against freezing even in the coldest weather.

There are two fireplaces, but if preferred, the chimneys can be built perfectly square, with flues only.

In the second story all the bed-rooms have good closets, the closet over the veranda being large enough for a trunk room. In the ceiling of the hall leading to the bath-room there is a scuttle, affording access to the attic, where there is ample storage room.

One bed-room appears irregular, but it has most convenient places for furniture.

The window over the staircase has stained glass, diffusing beautiful tints in the front part of the house.

These plans are characterized by simplicity and great convenience—every want being satisfied, that can be expected of a house of this size. The exterior is handsome and quite novel.

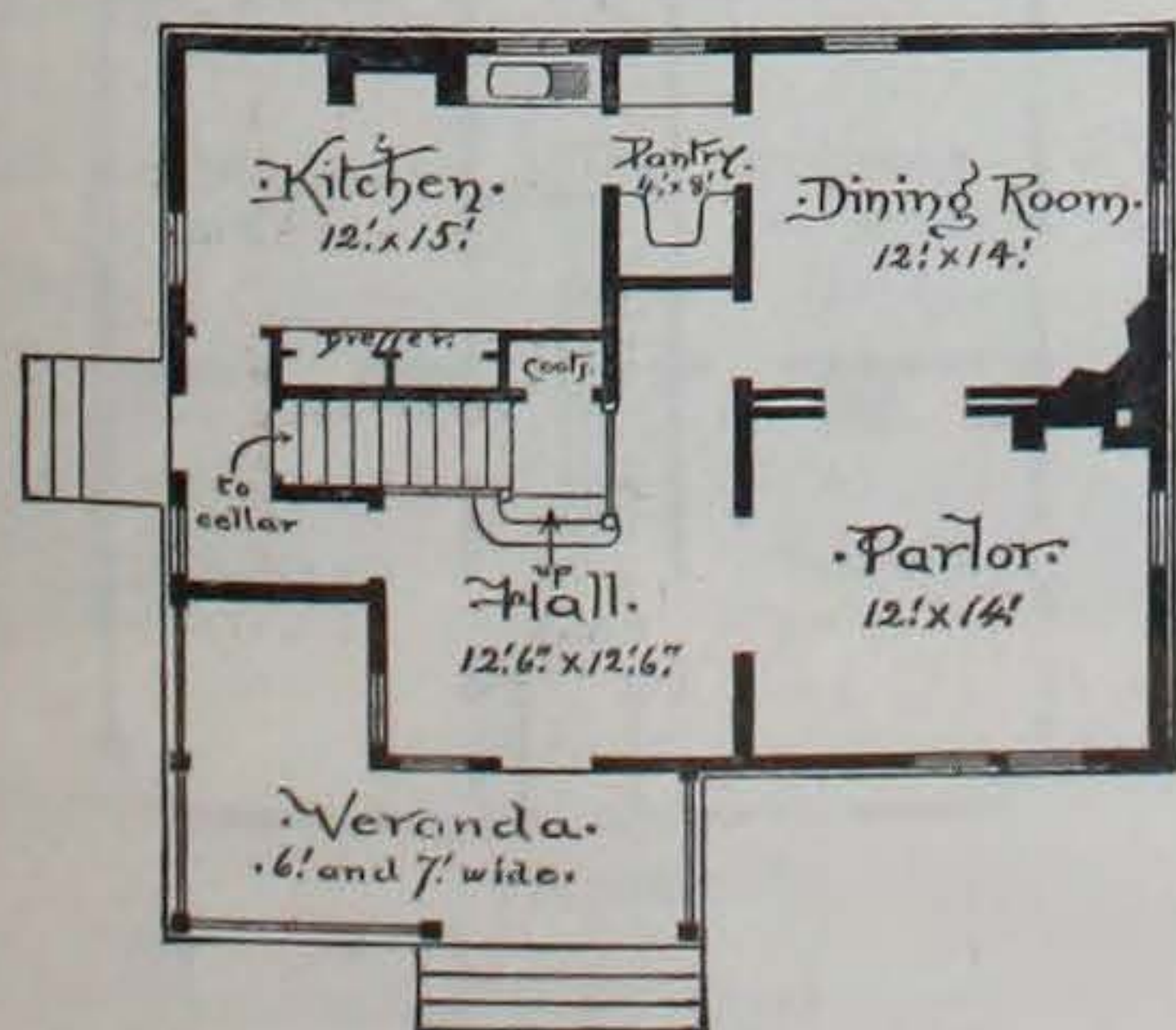
Stained glass is used quite extensively now even in cheap cottages; while it is beautiful when artistically used and in appropriate places, there is great danger of overdoing it, or of using it in unsuitable places and when unskillfully used it might better be omitted altogether.

In ordinary room windows it is generally out of place, as windows are made to look out of and to admit light, both of which uses it interferes with. A little of it used in the border lights of a dining-room, or library sash, is permissible however.

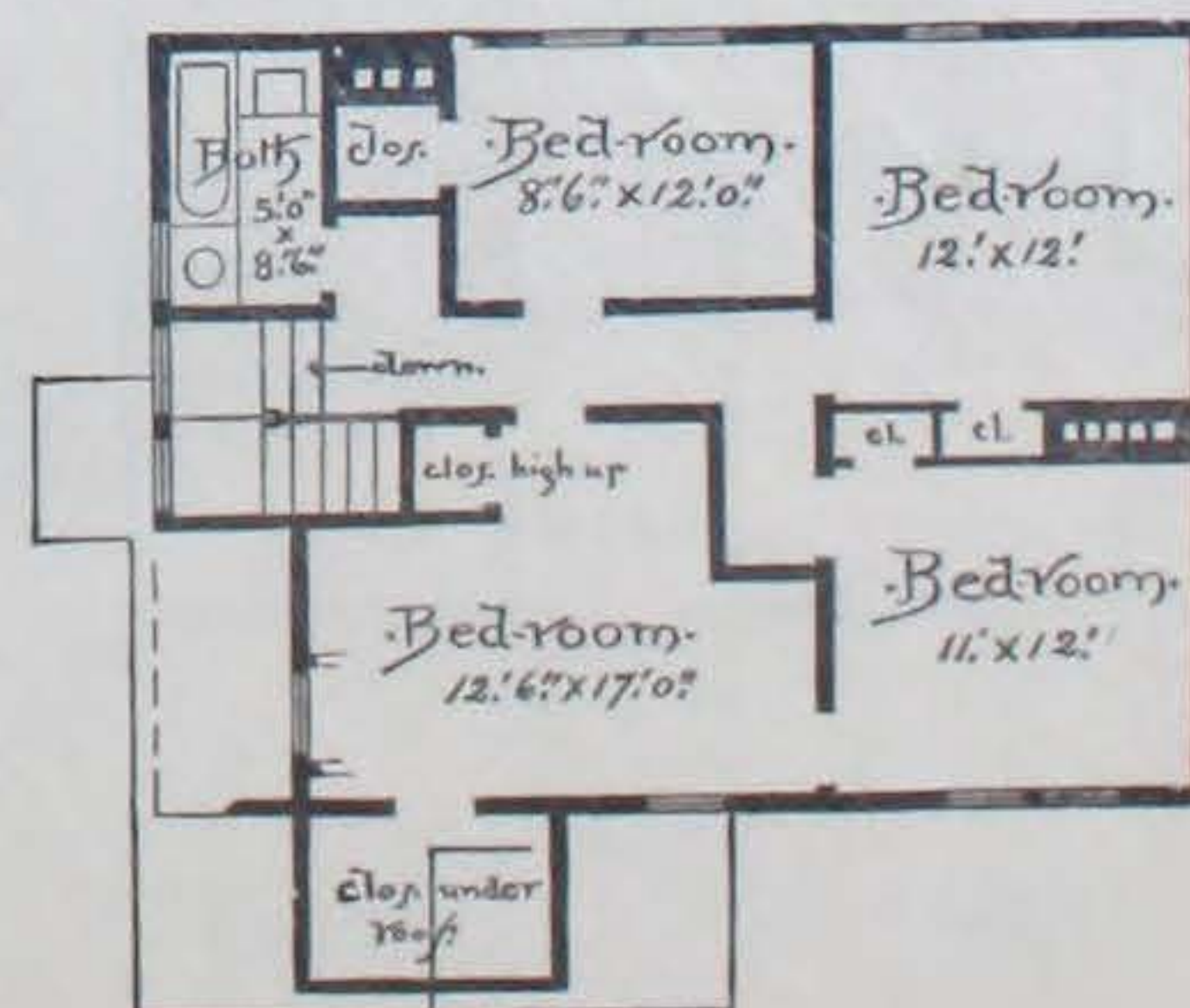
To light a hall or staircase it is appropriate, though even there it is often used to excess.

The tints should be soft and blend into one another. Glaring colors should be avoided. The service of an architect or a person of artistic taste should always be obtained in the selection of the colors.

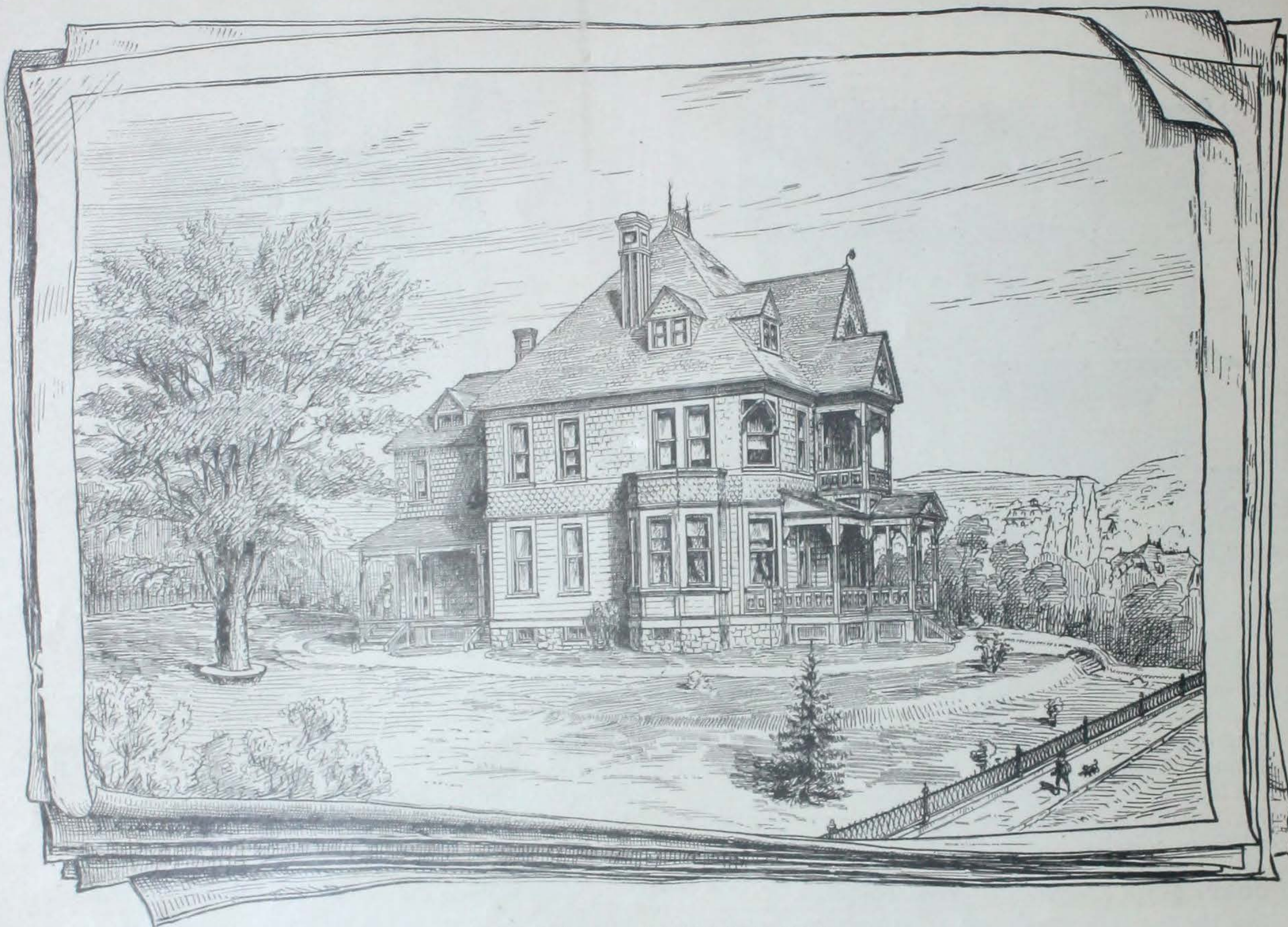
Properly used it is capable of most beautiful effects, and at small expense can be made to serve in beautifying the humble cottage as well as the most luxurious mansion. Improperly used, however, it becomes an absurdity, as does any misapplied decoration, and had better be omitted altogether.



FIRST FLOOR. NO. 222



SECOND FLOOR. NO. 222



DESIGN No. 223. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 223

SIZE OF STRUCTURE: Front, 37 ft. Side, 54 ft., 4 in., not including veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft.; Third Story, 8 ft.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Gables, shingled; Roof, slate.

COST: \$5,200, complete, except grates or heater.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute

the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

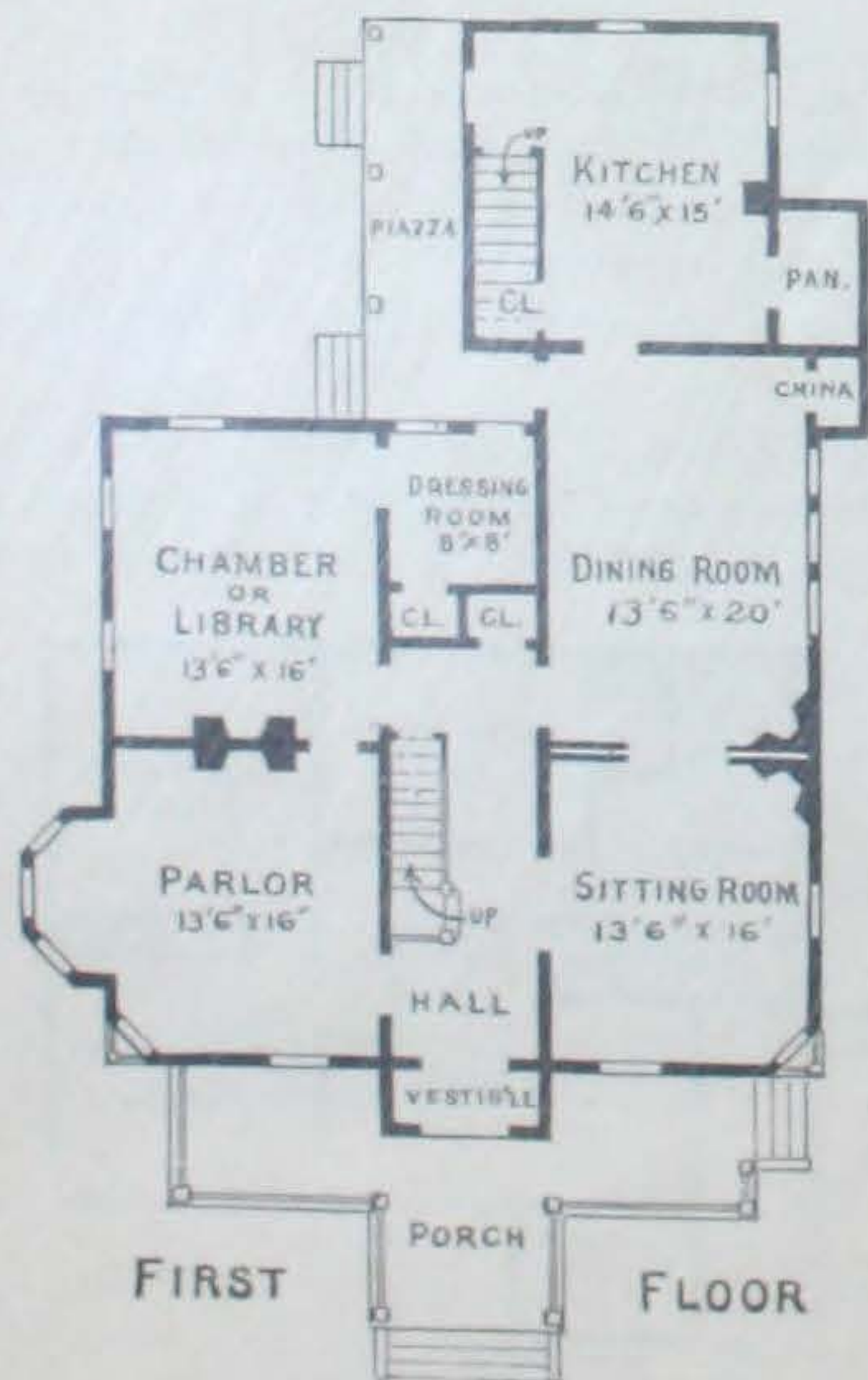
SPECIAL FEATURES.—Cellar under the whole house. Open fireplaces throughout first story, and hardwood mantels. The vestibule door lighting the hall is glazed with heavy plate glass.

Three rooms are finished in the attic story and there is open space for storage.

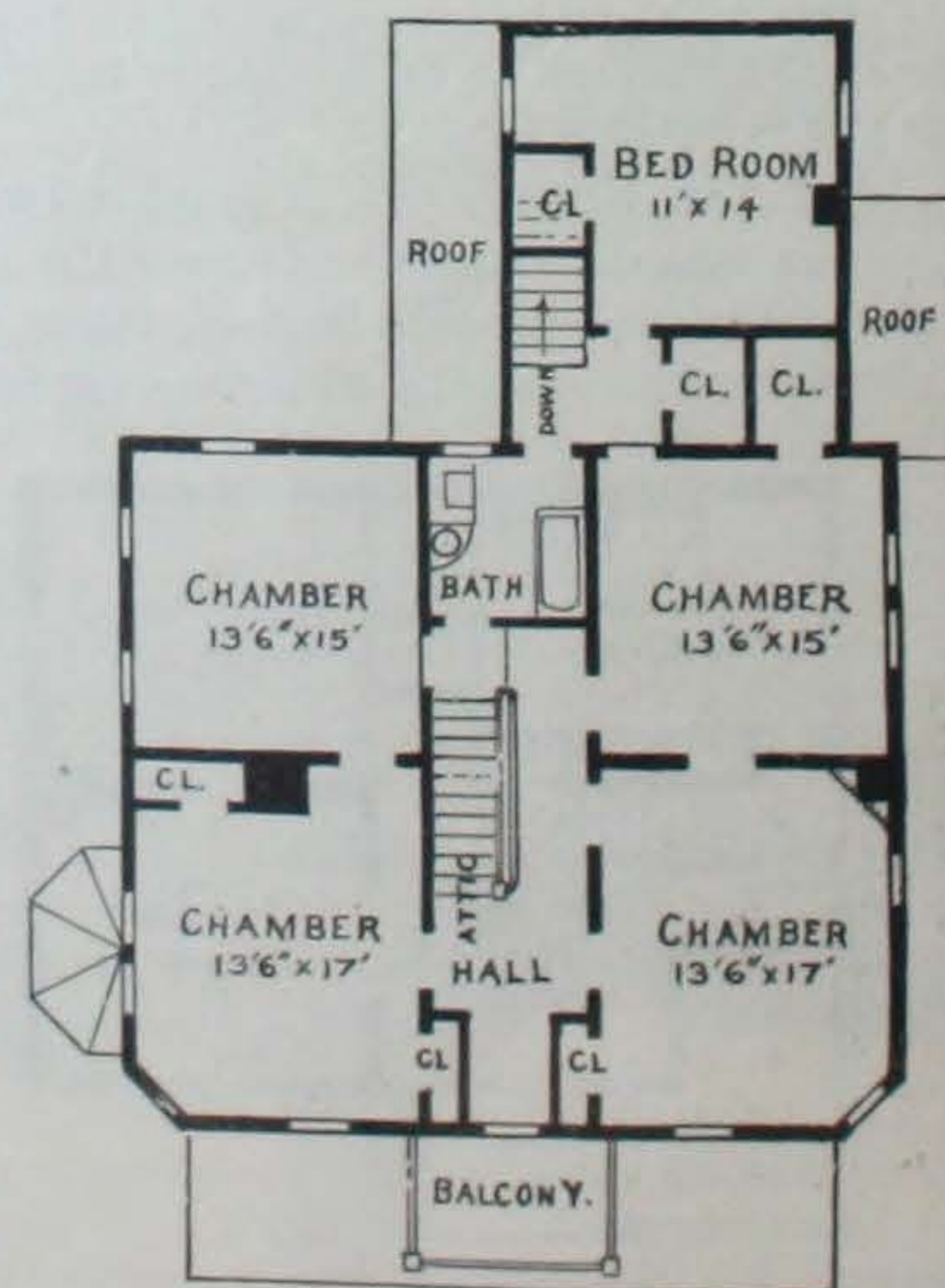
There is a fine covered balcony over the entrance porch. The whole design is picturesque in outline, and for that reason will look best when built on an eminence.

This house was recently built in Central Pennsylvania, a locality favored with cheap labor and material, at a total cost of \$3,200, including gas fixtures and heater, all ready to occupy. This is a good example of the difference in cost by reason of locality.

The intending builder should always consider this, and not be misled by the cost in the neighborhood of New York City.



FIRST FLOOR. NO. 223



SECOND FLOOR. NO. 223



DESIGN No. 224. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 224

SIZE OF STRUCTURE: Front, 36 ft., including veranda. Side, 50 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 9 ft., 6 in.; Second Story, 9 ft.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Roof, shingles.

COST: \$3,400, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

If the library is used as a sitting-room, and never as a bed-room, it is well to connect it with the dining-room by a wide opening. Large closets throughout the house.

NOTES

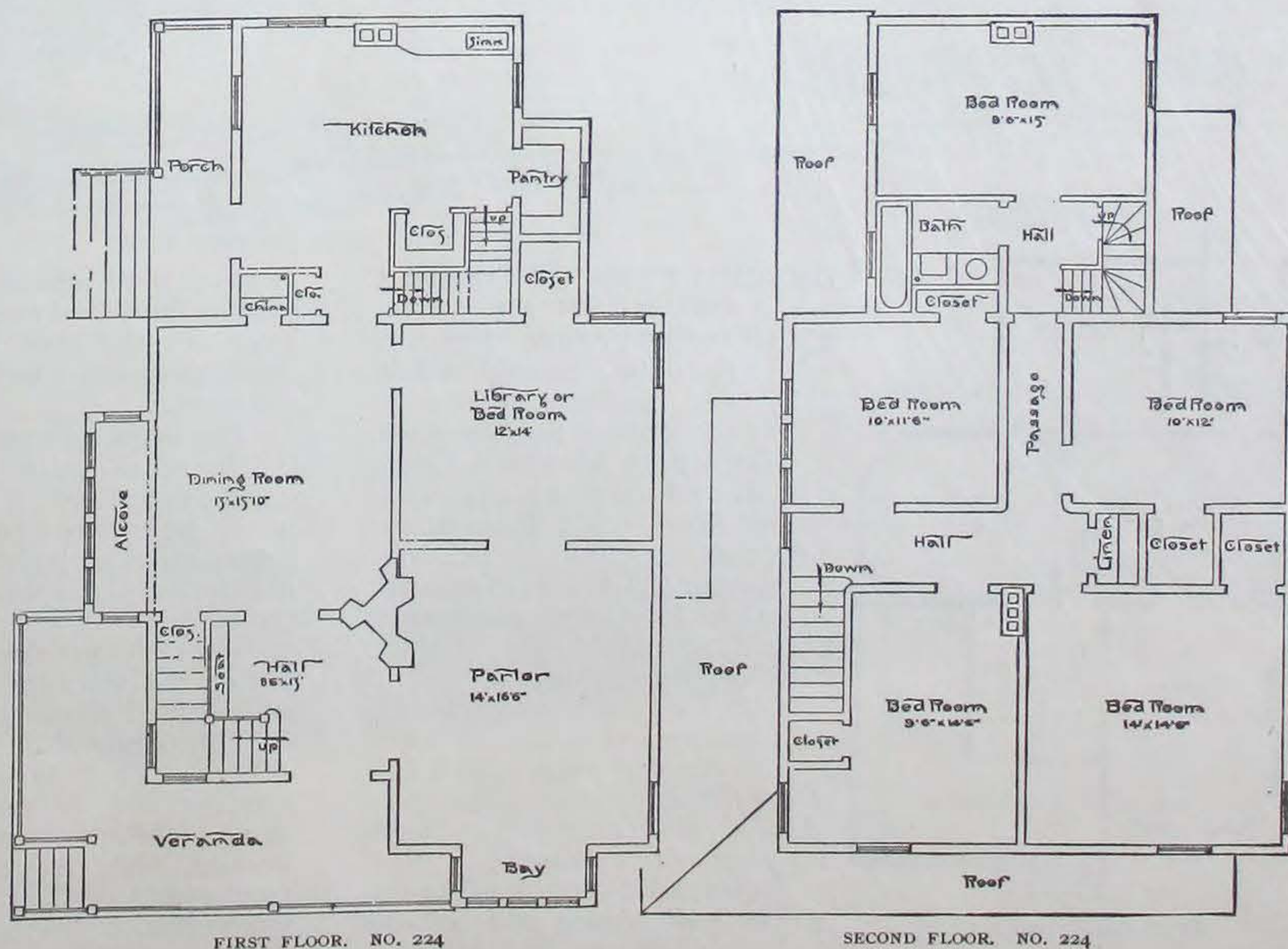
The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

This design can be reversed, enlarged, reduced, or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Cellar under the whole house. Two good bed-rooms can be finished in the attic, still leaving ample storage room.

A fine hall with a hardwood seat and a fireplace, connected with the parlor and dining-room by wide openings for curtains.

A beautiful dining-room, the alcove windows making it a very light and cheerful room. A bay-window in the parlor.

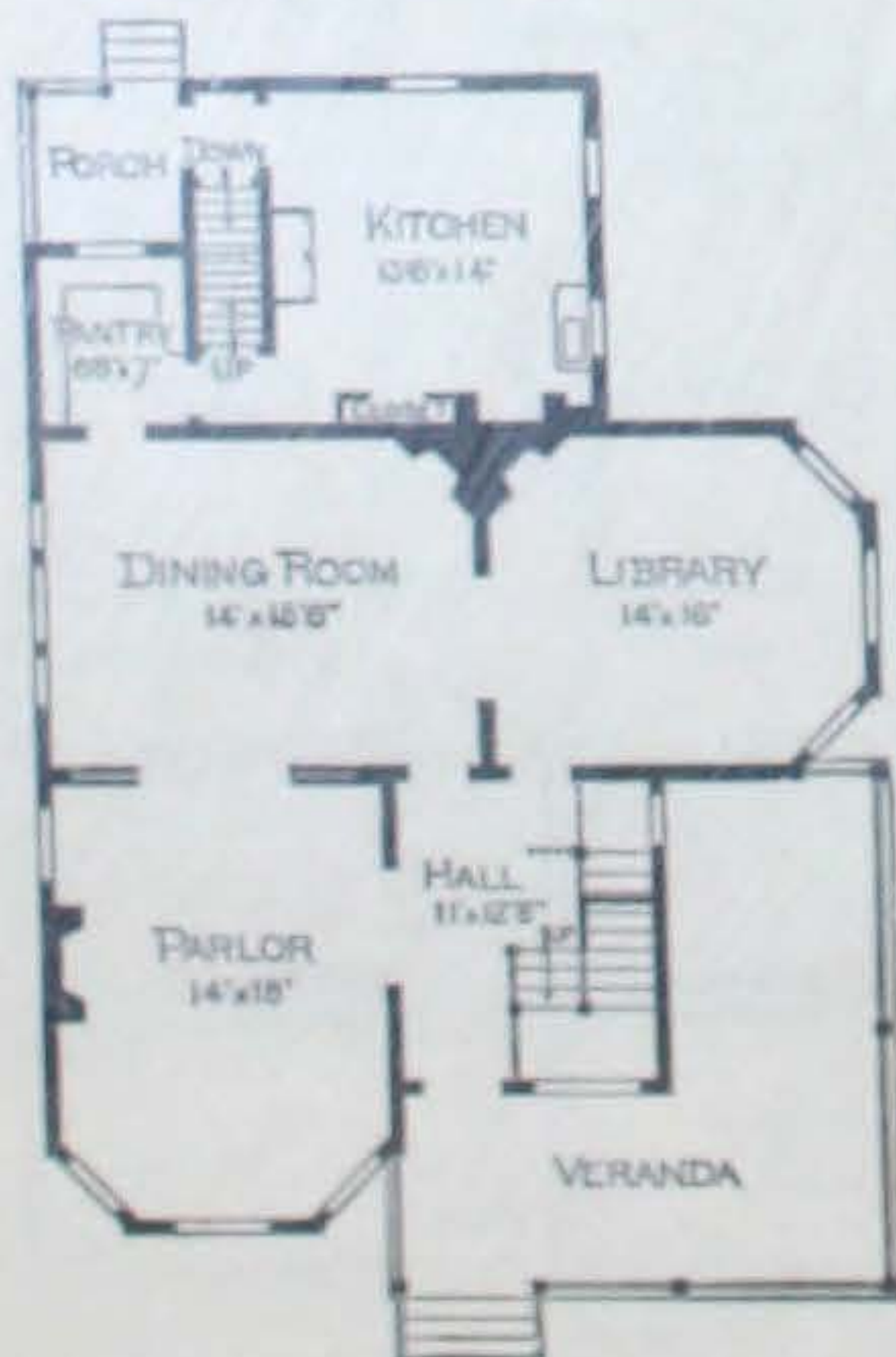


FIRST FLOOR. NO. 224

SECOND FLOOR. NO. 224



DESIGN No. 225. PERSPECTIVE VIEW



FIRST FLOOR. NO. 225

**DESCRIPTION OF DESIGN
NUMBER 225**

SIZE OF STRUCTURE: Front, 36 ft., 6 in., extreme width. Side, 51 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft., 6 in.; Second Story, 9 ft.; Third Story, 8 ft., 6 in.

MATERIALS: Foundation, brick and stone; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$4,200 complete, except heating and grates.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

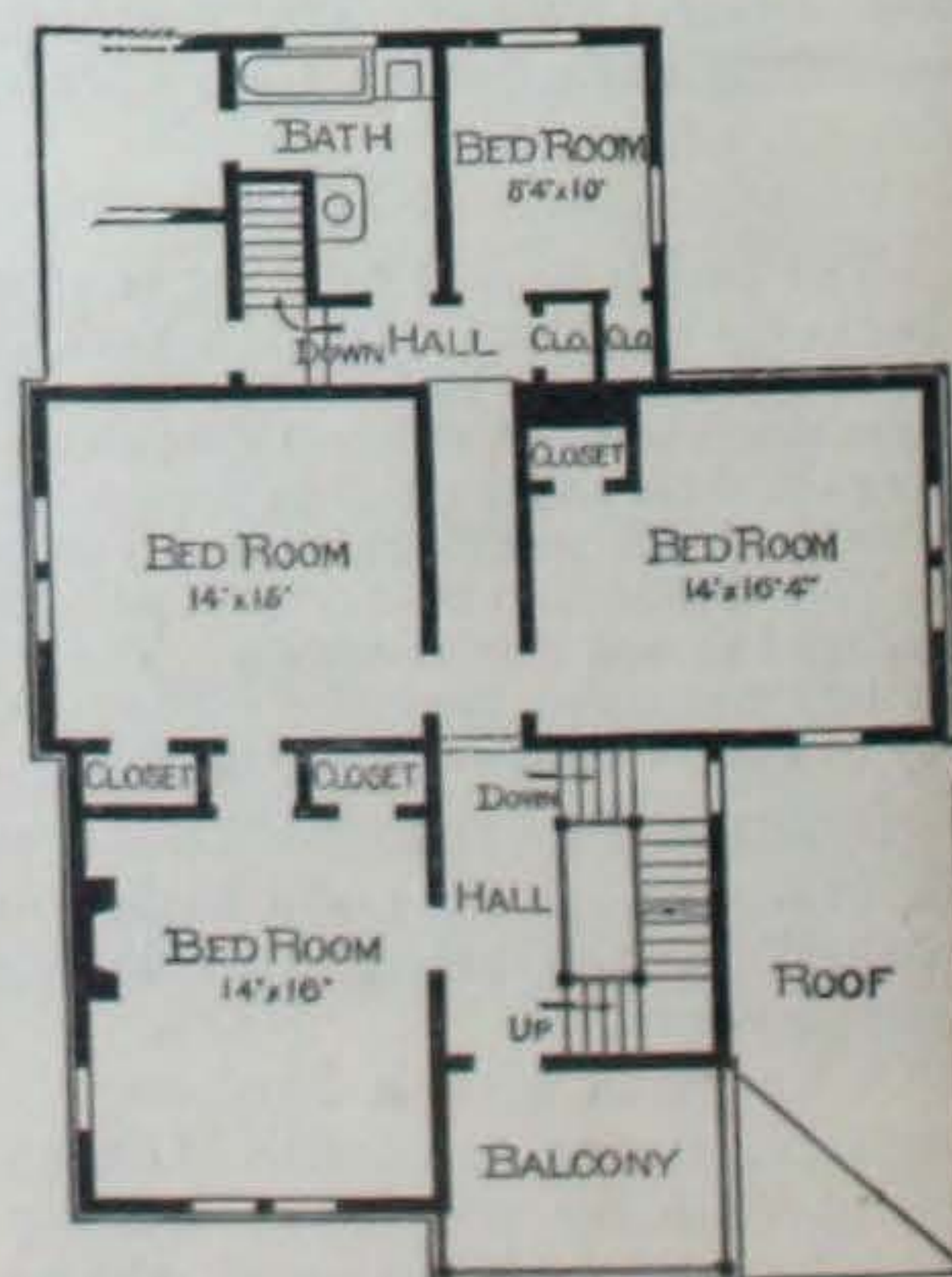
SPECIAL FEATURES.—The cellar extends under half of the

house, is well lighted and has both an inside and outside stairway. In the attic there are three bed-rooms, a hall and storage room.

The large covered balcony is a beautiful feature affording great comfort, but if preferred it can be enclosed to use as a sewing-room or bed-room, and not injure the appearance of the house.

The sash over the first landing of the staircase is glazed with stained glass.

This is one of our premium designs. There is the utmost comfort and convenience secured in the arrangement of the interior, while the exterior is picturesque and in thorough good taste.



SECOND FLOOR. NO. 225

DESCRIPTION OF DESIGN NUMBER 226

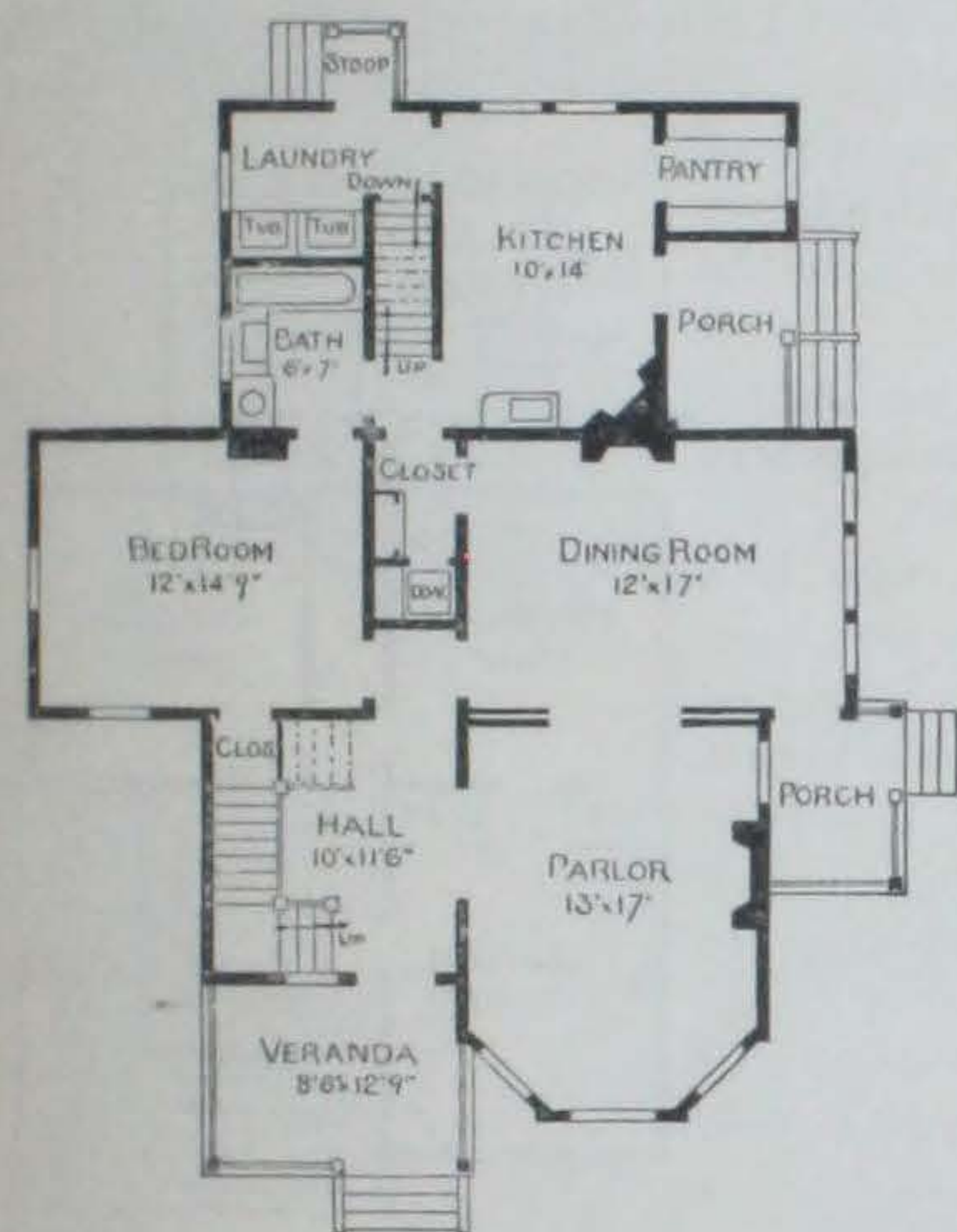
SIZE OF STRUCTURE: Front, 39 ft., 6 in., extreme width. Side, 46 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft., 6 in.; Second Story, 9 ft.; Third Story, 8 ft., 6 in.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, clapboards; Gables, shingles; Roof, shingles.

COST: \$4,300, complete, except grates, kitchen range and furnace.



FIRST FLOOR. NO. 226

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c.

(these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—The elevations of this house are in the same style as Number 225, but reversed.

The cellar extends under the whole house; building it half the size would reduce cost considerably. It is a useless expense to excavate and wall up four times as much cellar room as is ever required; and it is not necessary on account of health and warmth as many suppose.

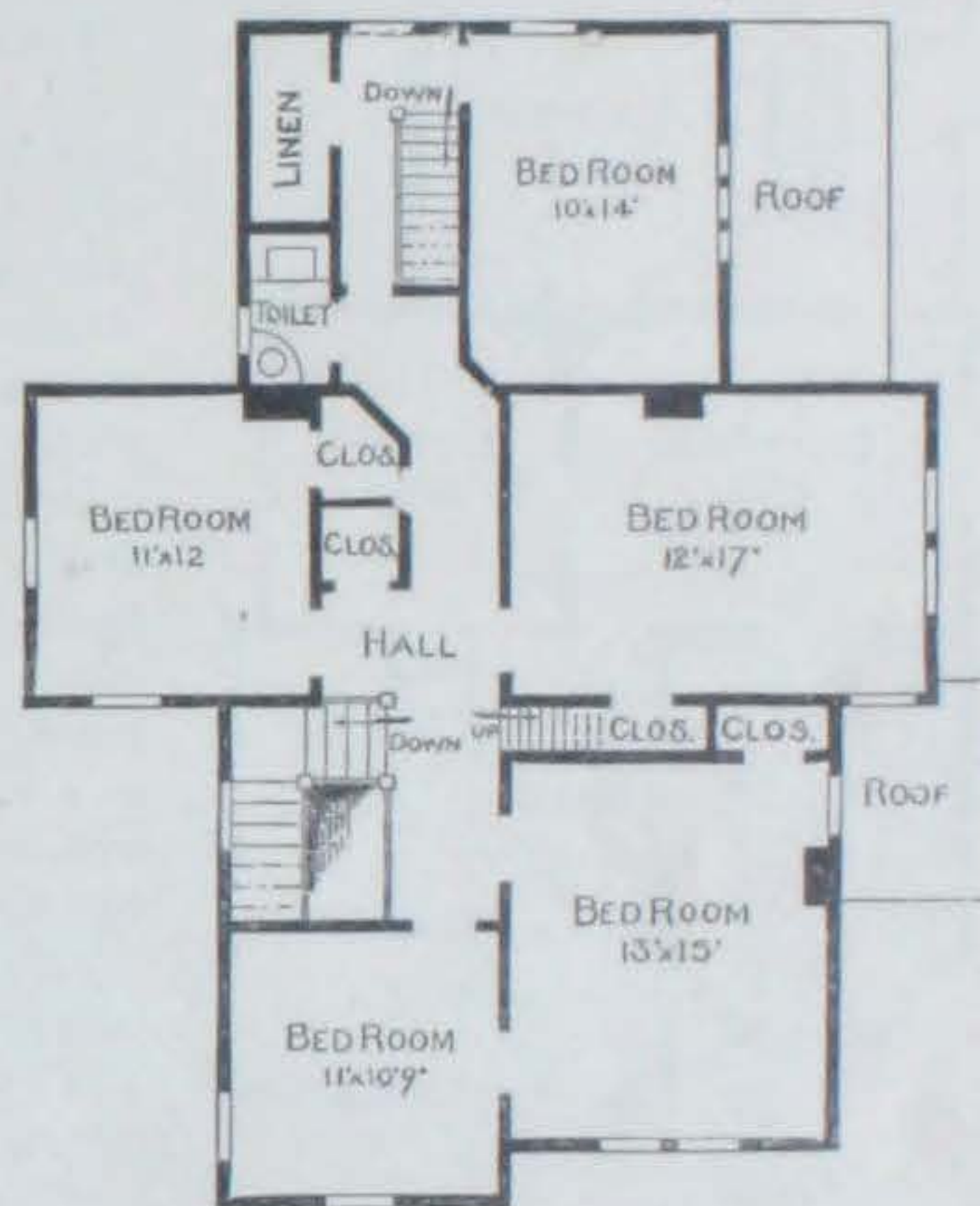
Three large rooms and storage room in the attic.

The plumbing is all perpendicular and kept well together, the pipes running down by the chimney.

The bath-room can be placed in the second story if preferred.

The dumb-waiter from the cellar carries up fuel, etc., without much labor.

All of the interior arrangements are complete; the client building from this design has a commodious, perfect and beautiful house.



SECOND FLOOR. NO. 226

DESCRIPTION OF DESIGN NUMBER 227

SIZE OF STRUCTURE: Front, 29 ft. Side, 50 ft., 6 in.; with summer kitchen, 60 ft., 6 in.

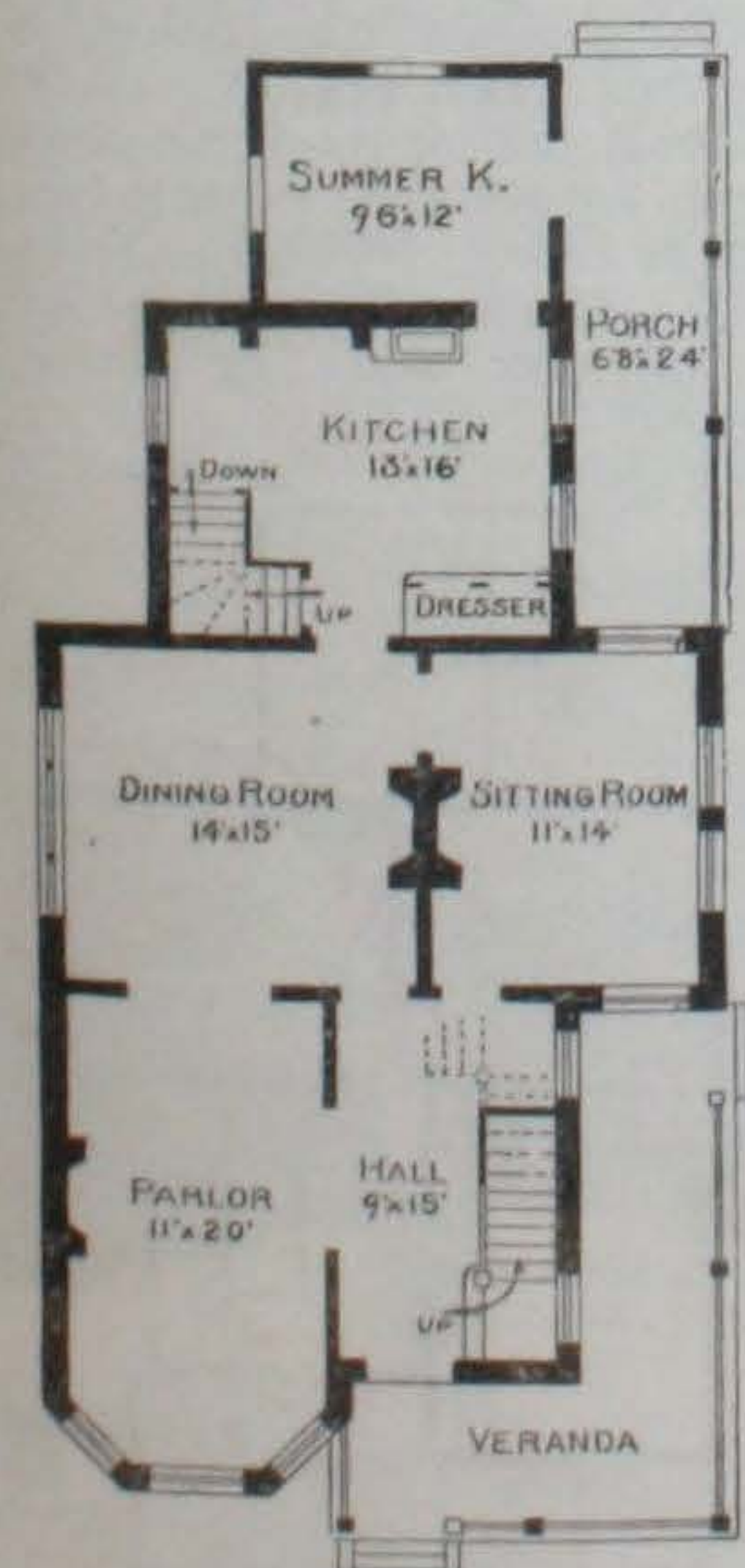
SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft., 6 in.; Second Story, 9 ft.; Third Story, 8 ft., 4 in.

MATERIALS: Foundation, brick; First Story, brick; Second Story, shingles—the wings are brick; Gables, shingles; Roof, slate.

COST: \$4,400, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]



FIRST FLOOR. NO. 227

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants.

The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

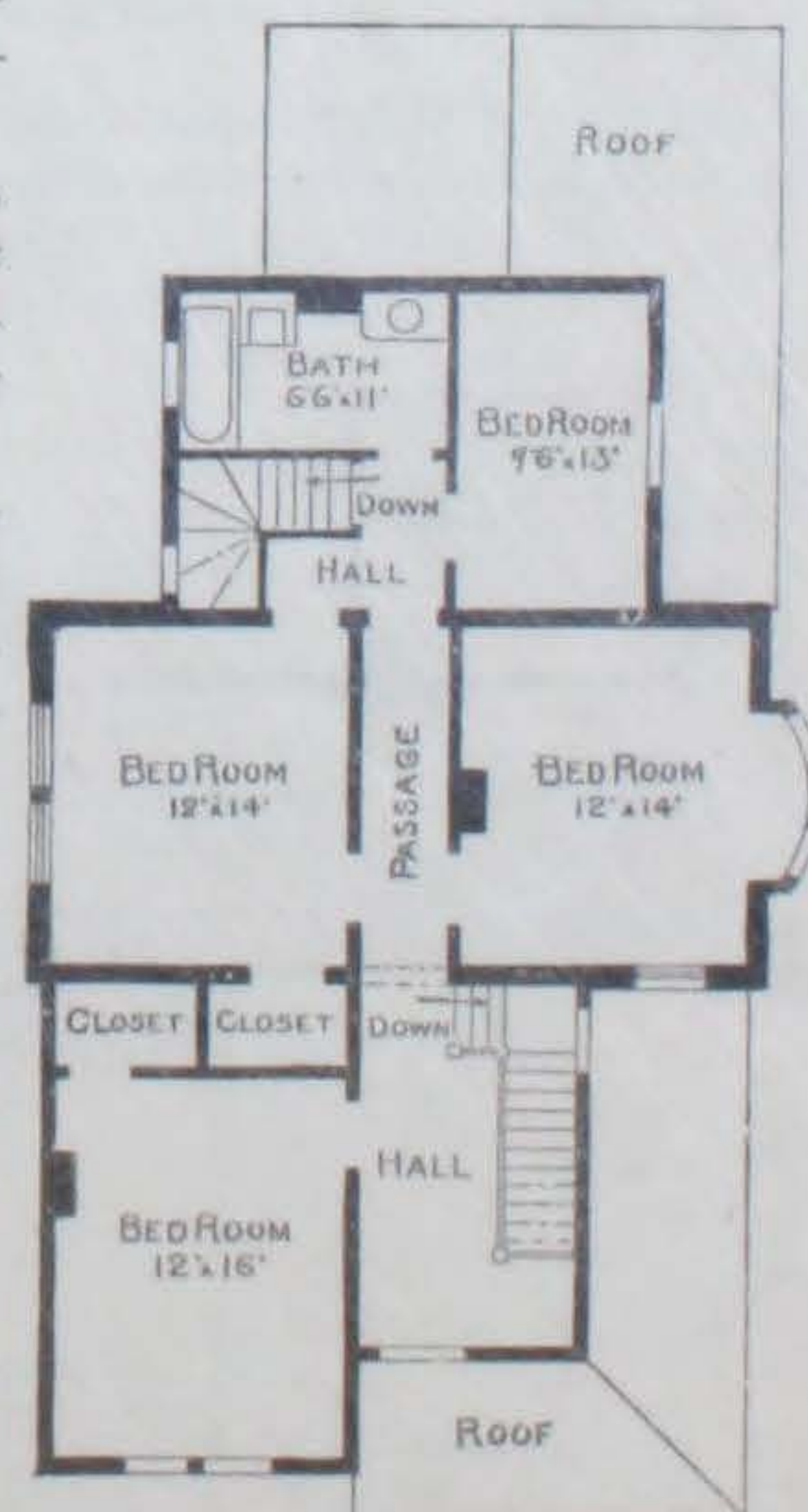
SPECIAL FEATURES.—The exterior of this design also is similar to that of Number 225.

Cellar under the kitchen and rear half of main house. The summer kitchen is frame and only one story high. The back stairway runs from the cellar to the second story. In front there is a stairway to the attic where there is space for four fine bedrooms.

In the front of second story, where roof is shown (by mistake of the engraver), there is a balcony the same as in Number 225.

Only the second story of the main house is frame, the brick walls of the dining-room and sitting-room wings being carried up to the cornice line.

The pretty, bowed oriel window in the right hand bedroom makes the principal variation from the outlines of Number 225. For the capitalist who desires to build houses that will rent well and sell well, it is a valuable point to know that Number 225, and this series of modifications are universally popular. The error of building houses that people do not like is often made.



SECOND FLOOR. NO. 227

WITHDRAWN

SHOPPELL'S MODERN HOUSES

DESCRIPTION OF DESIGN NUMBER 228

SIZE OF STRUCTURE: Front, 31 ft. Side, 46 ft.

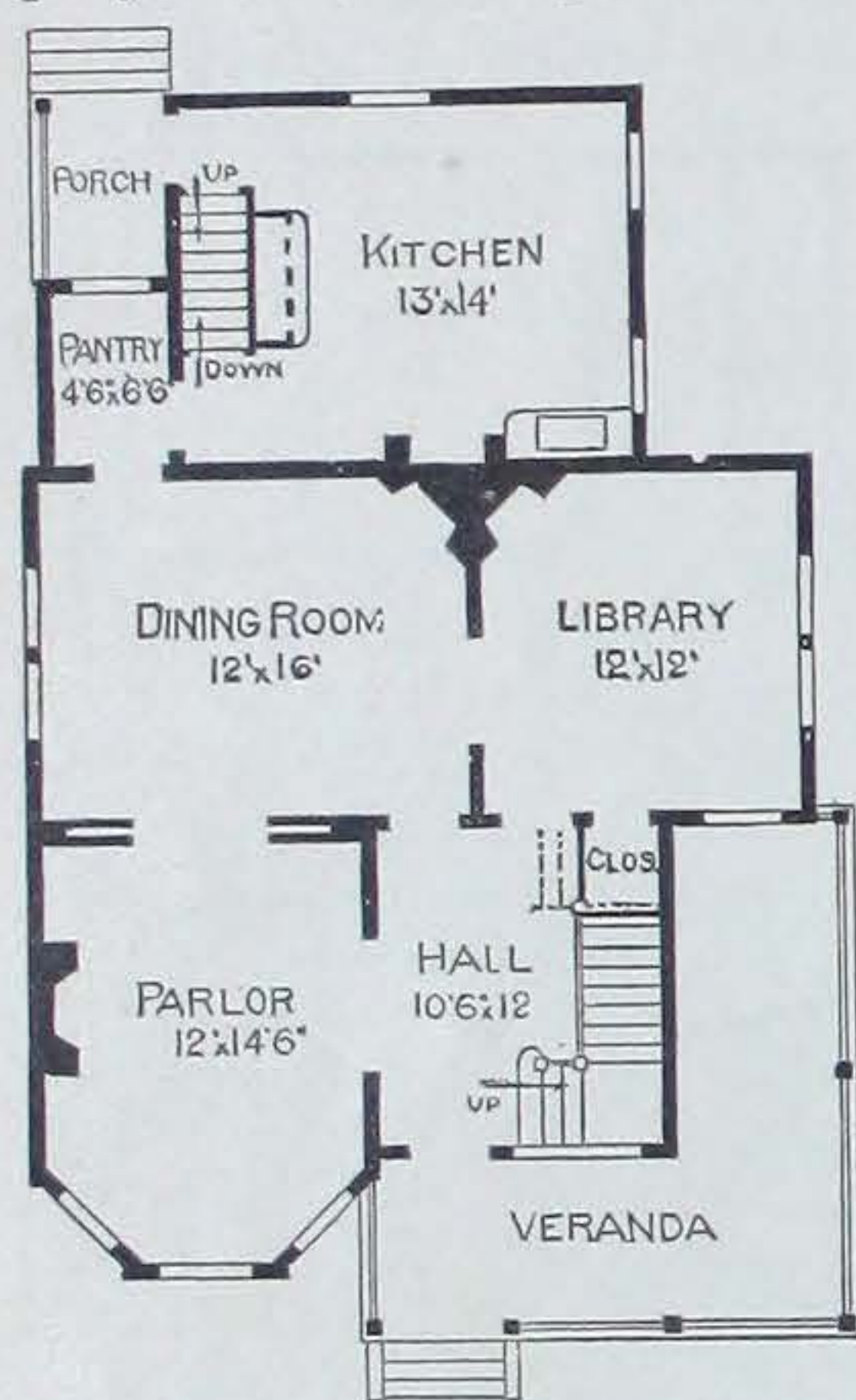
SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft., 6 in.; Second Story, 9 ft.; Third Story, 8 ft., 6 in.

MATERIALS: Foundation, brick and stone; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$3,700, complete, except grates and heating.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]



FIRST FLOOR. NO. 228

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

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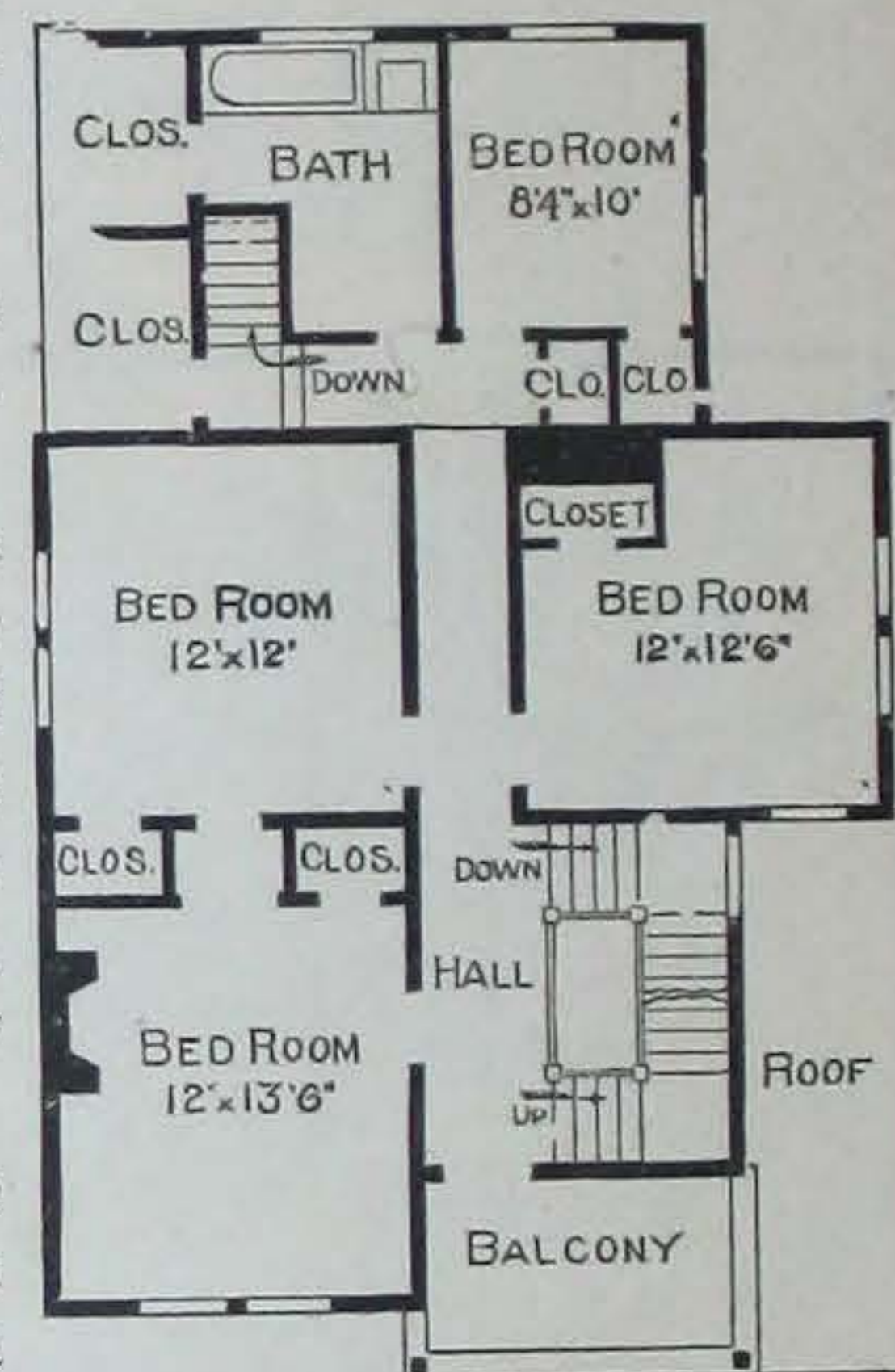
SPECIAL FEATURES.—This design preserves the principal features of both the exterior and the arrangement of rooms of Number 225, but is reduced in size. The height of roof, also, is reduced a little in order to keep the same proportions. There are three rooms in the attic story and plenty of storage space. Cellar under the kitchen. There are open fireplaces, with pretty hardwood mantels, provided in the parlor, dining-room, library, and bed-room over library. In addition to heating, they supply the best system of ventilation ever invented.

The pantry is large and well fitted up with drawers, shelves, hooks, &c., and is well lighted. The bath-room has a large closet formed under the sloping roof of the extension, and a similar closet is obtained at the top landing of the servants' stairs.

The wide openings between rooms still keep this a large house, practically.

An observing friend, who is a great traveler, says that he sees "our houses"—that is, houses designed by us—all over the country; that they are the handsomest houses in every neighborhood, in his opinion, and that this design appears very often.

While we advise all clients to adopt a plan to suit their own special needs, it is wise to build a house that will sell well.



SECOND FLOOR. NO. 228

DESCRIPTION OF DESIGN NUMBER 229

SIZE OF STRUCTURE: Front, 29 ft. Side, 44 ft., 6 in.

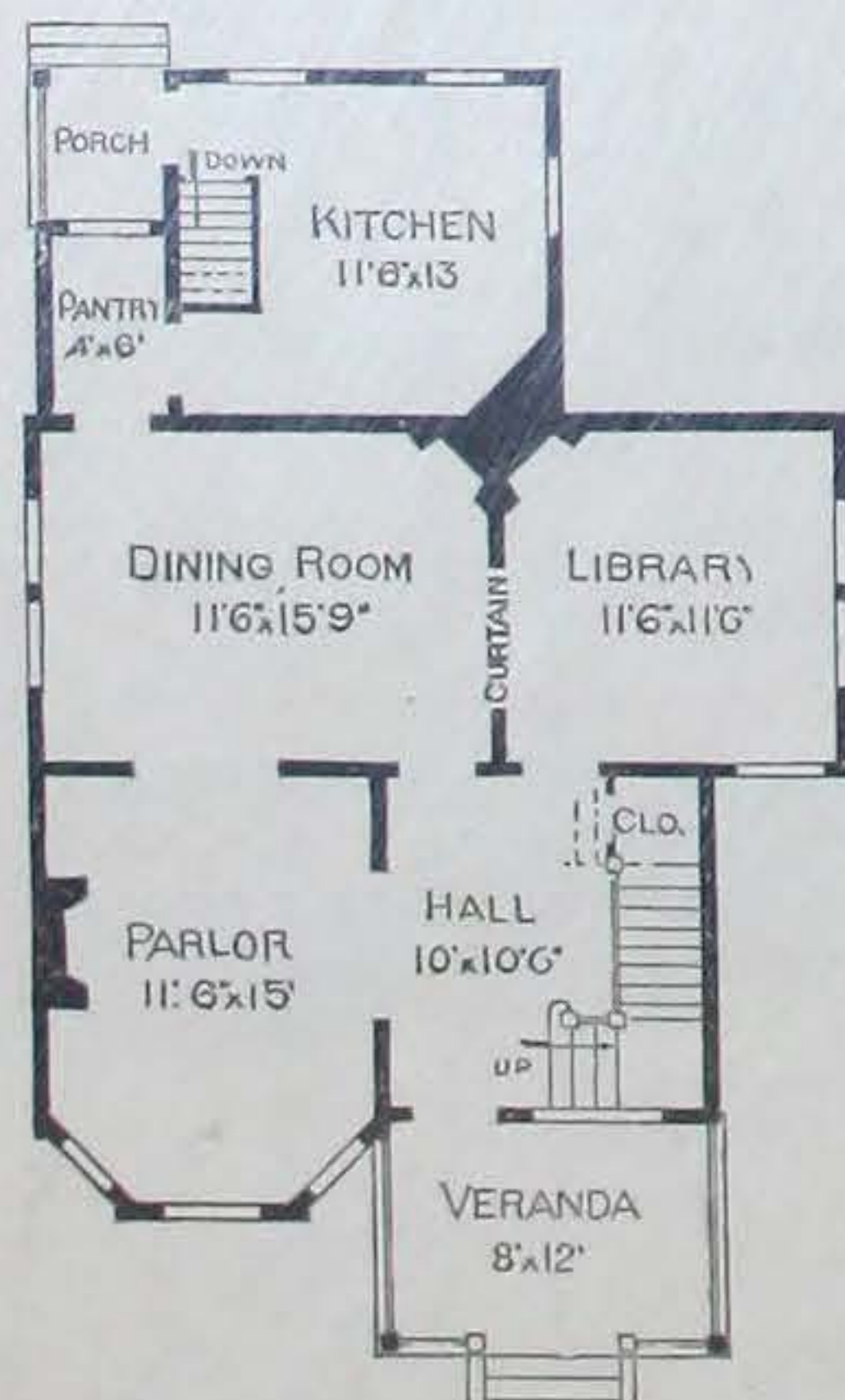
SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft., 6 in.; Third Story, 8 ft.

MATERIALS: Foundation, brick and stone; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$2,500, complete, except grates.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]



FIRST FLOOR. NO. 229

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

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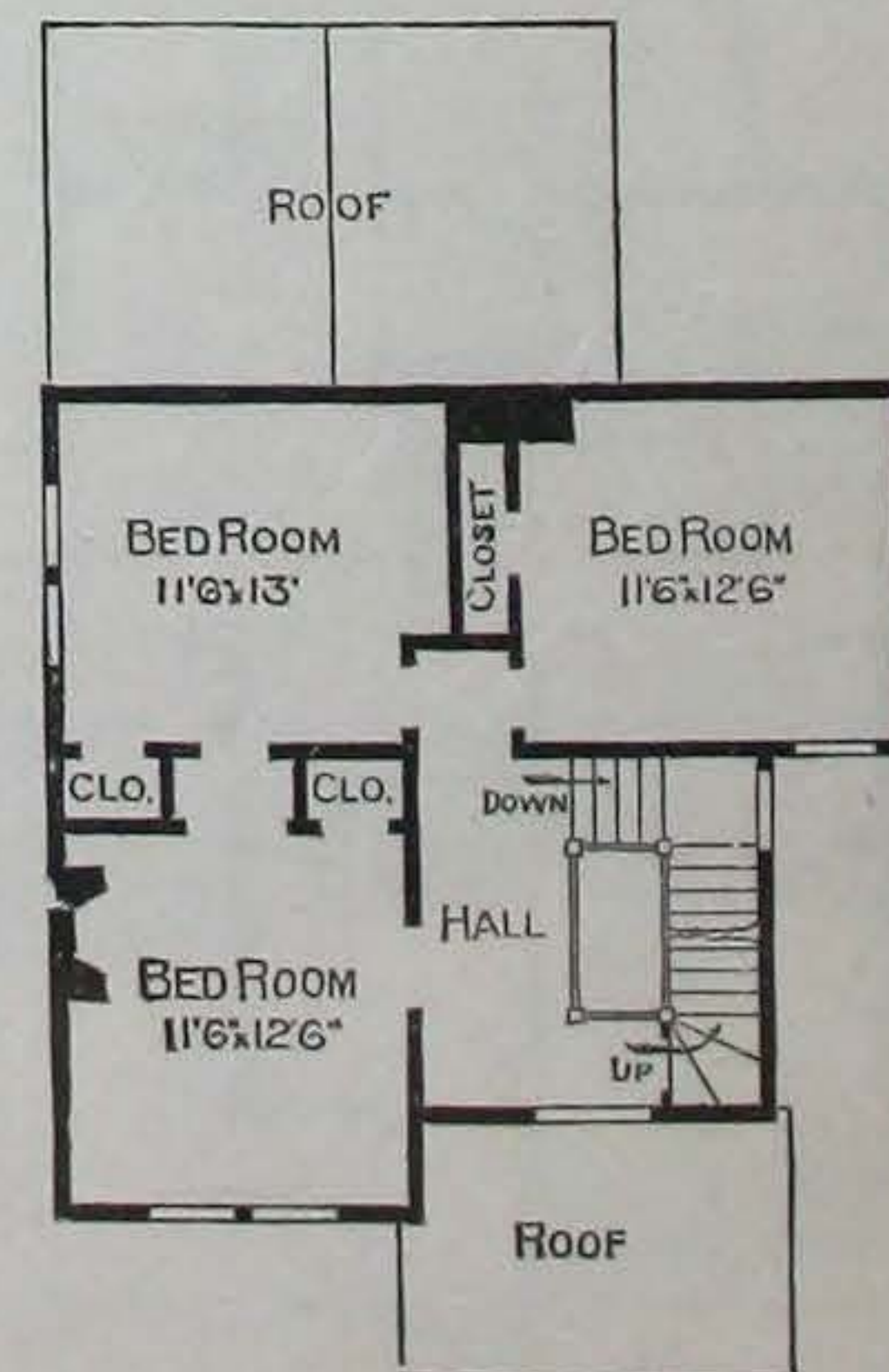
SPECIAL FEATURES.—This is a still greater reduction in size of Number 225, and with the omis-

sion of side veranda and front balcony. The kitchen extension is but one story high. Cellar under the kitchen only.

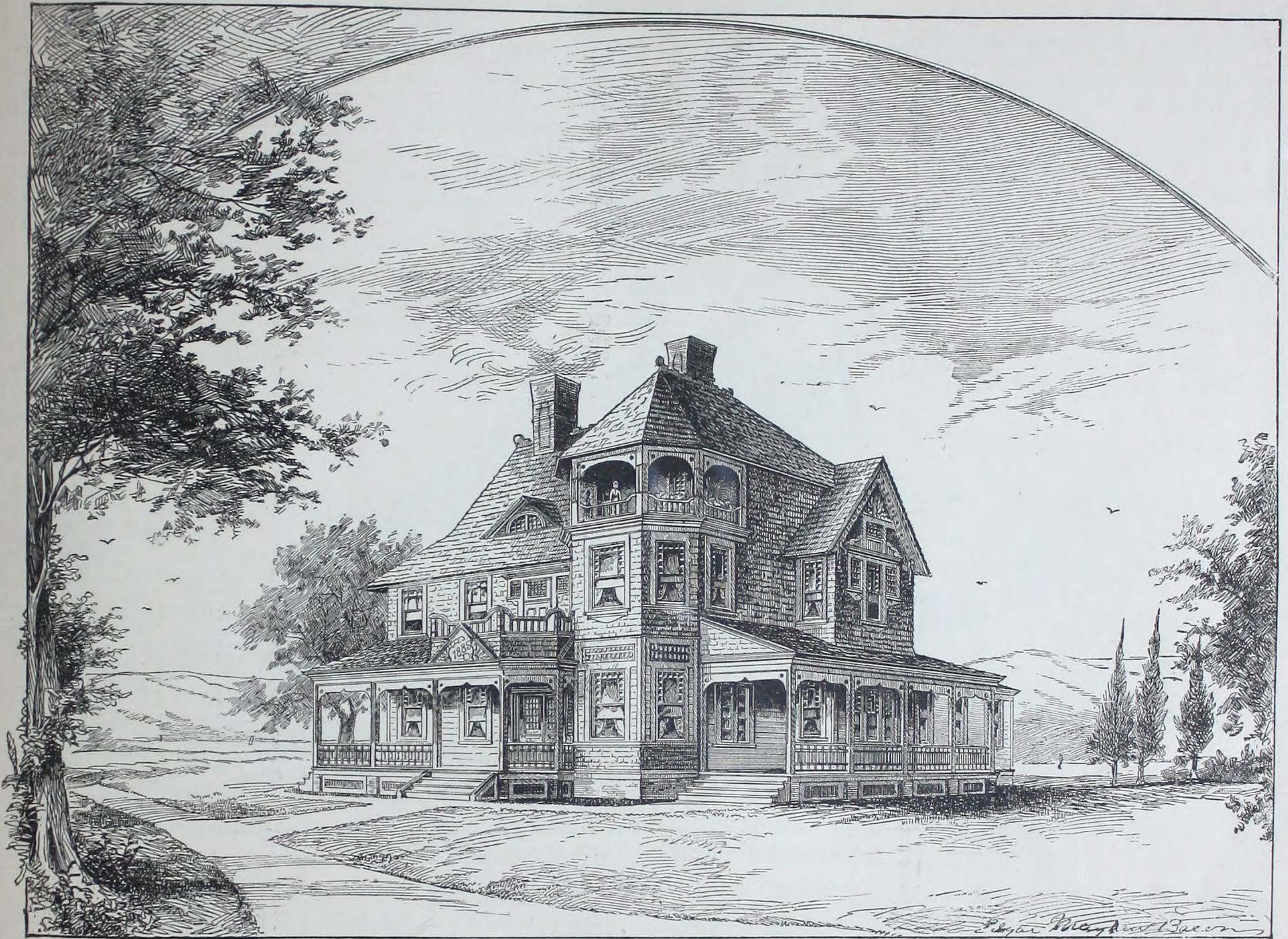
So effective are wide openings between rooms, this design has lost but little in convenience by reduction in size. It is still an elegant and roomy house. It can be better finished, it is easier to care for, it costs less, it has all of the advantages of a small house (and they are many), while it affords most of the comforts, conveniences and style of a large house.

The intending builder may think that the reduction in size and cost means an inferior quality of materials. This would be a mistake. Our specifications for all structures call for good materials. The expense for labor on this house equals the expense for materials, therefore it is manifestly poor economy to expend the labor in working up poor materials. The small expense for architectural services is saved over and over again by having carefully drawn and exact specifications.

We have noticed an inclination lately, on the part of many well-to-do people, to move out of large houses into small, well-arranged modern houses. There are more conveniences, better sanitary arrangements, and more "room" in comparatively small modern houses than in many old homesteads. The difference in expense and labor involved in keeping them warm and "in order" is greatly in favor of the modern house. Some of the old houses shorten the lives of wives and daughters—they are so large and inconvenient that competent servants will not work in them; to superintend the work of a large house with incompetent servants is a very unhappy burden that few ladies can bear without serious injury to health.



SECOND FLOOR. NO. 229



DESIGN No. 230. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 230

SIZE OF STRUCTURE: Front, 48 ft., 6 in.; extreme width, including veranda, 59 ft., 6 in. Side, 82 ft., 4 in., inclusive of veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 11 ft., 6 in.; Second Story, 11 ft.; Third Story, 10 ft.

MATERIALS: Foundation, brick piers; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST, \$5,700, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

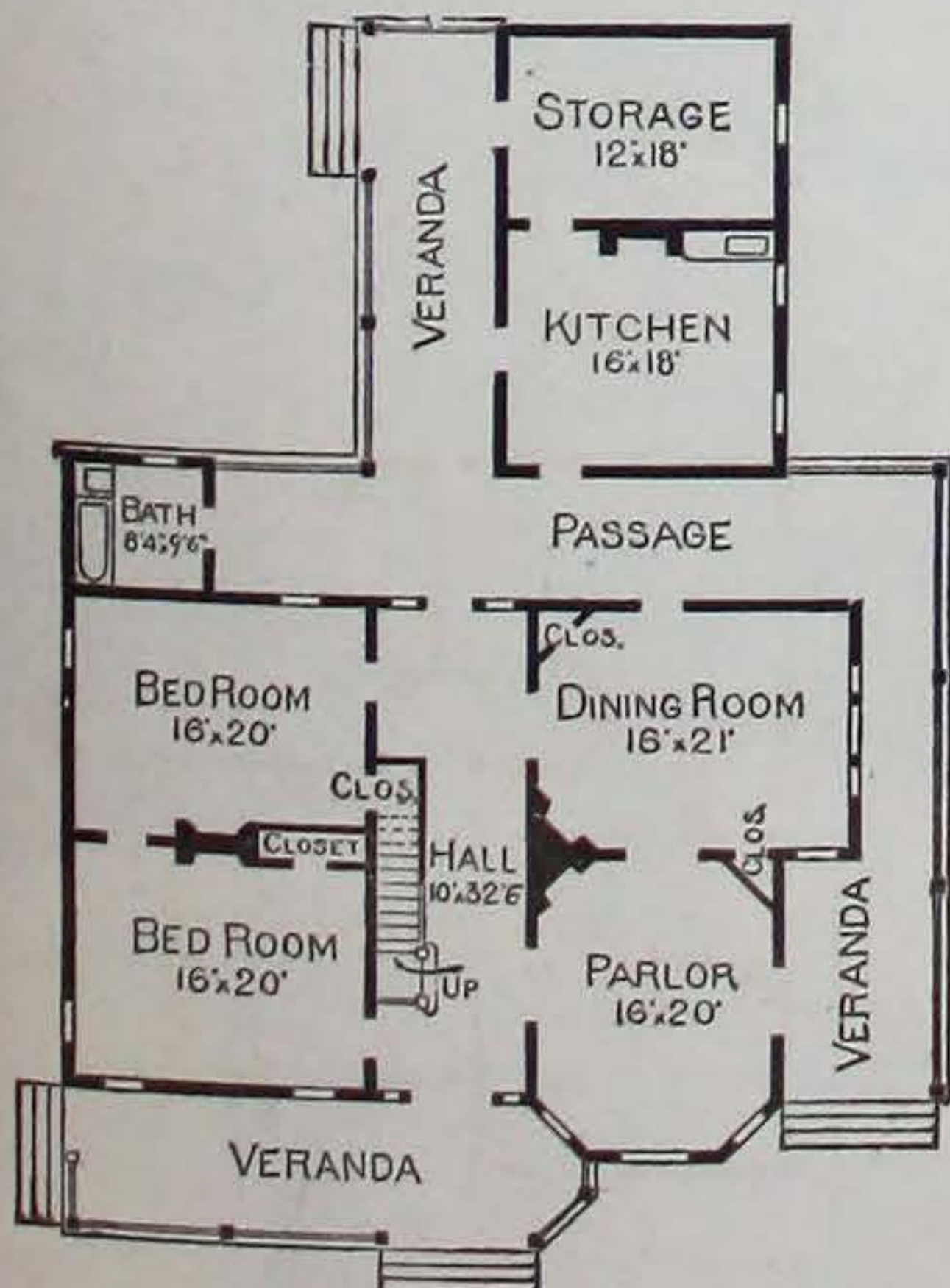
The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies

cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

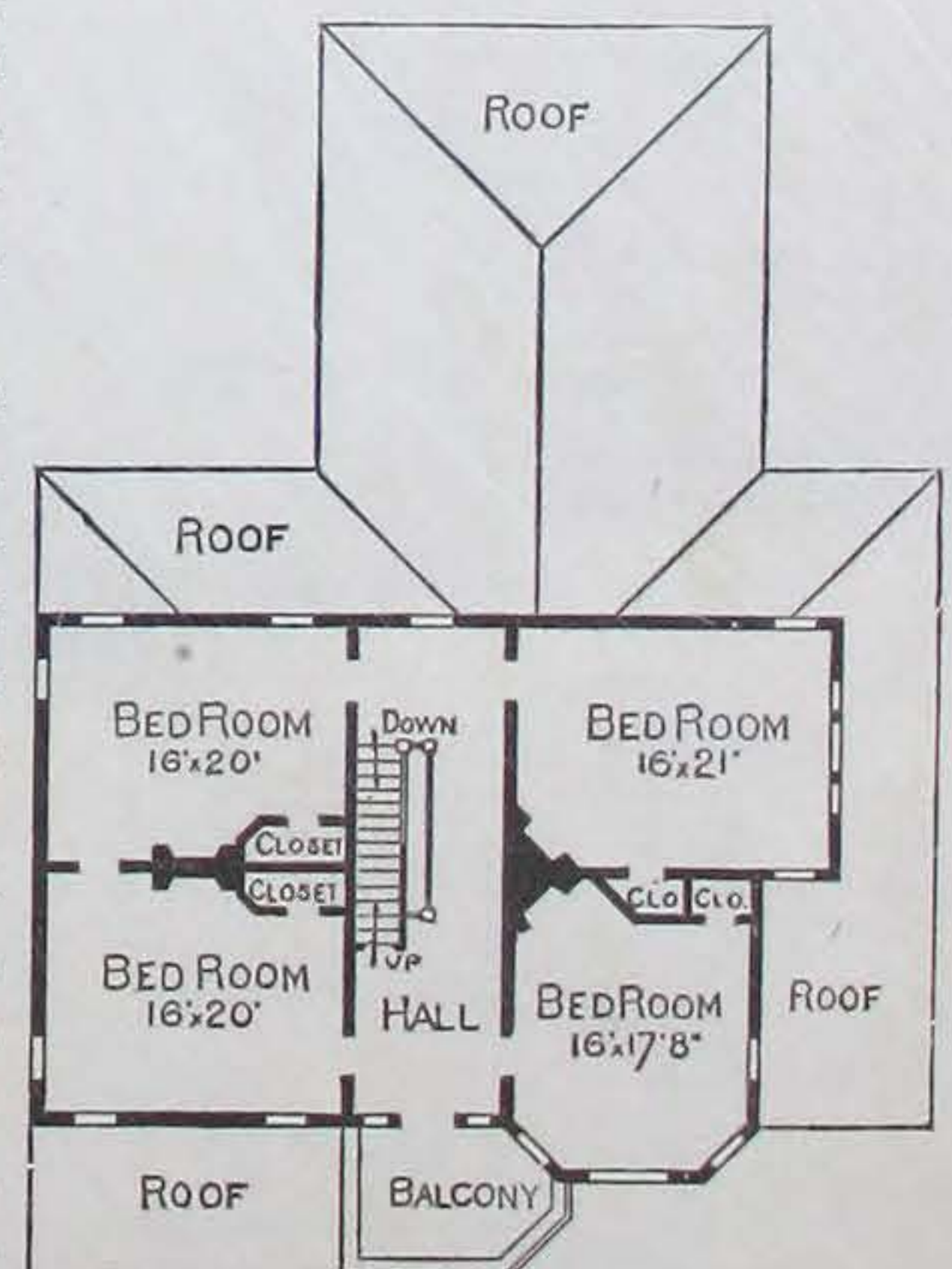
Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—This house was designed for the South. It has a hall 10 feet wide, running through from front to rear; large open fireplaces in both first and second stories; large, wide windows; verandas, 11 feet wide; detached kitchen; an open balcony over the front entrance, 9 feet 6 inches by 13 feet, access to which is provided by a jib door, and a covered balcony or observatory in the third story, 9 feet by 16 feet.



FIRST FLOOR. NO. 230



SECOND FLOOR. NO. 230



DESIGN No. 231. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 231

SIZE OF STRUCTURE: Front, 22 ft., 10 in. Side, 57 ft., 6 in., including front veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft.; Third Story, 8 ft.

MATERIALS: Foundation, stone; First Story, frame; Second Story, frame; Roof, shingles.

COST: \$4,450, complete, except range, grates and heater.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

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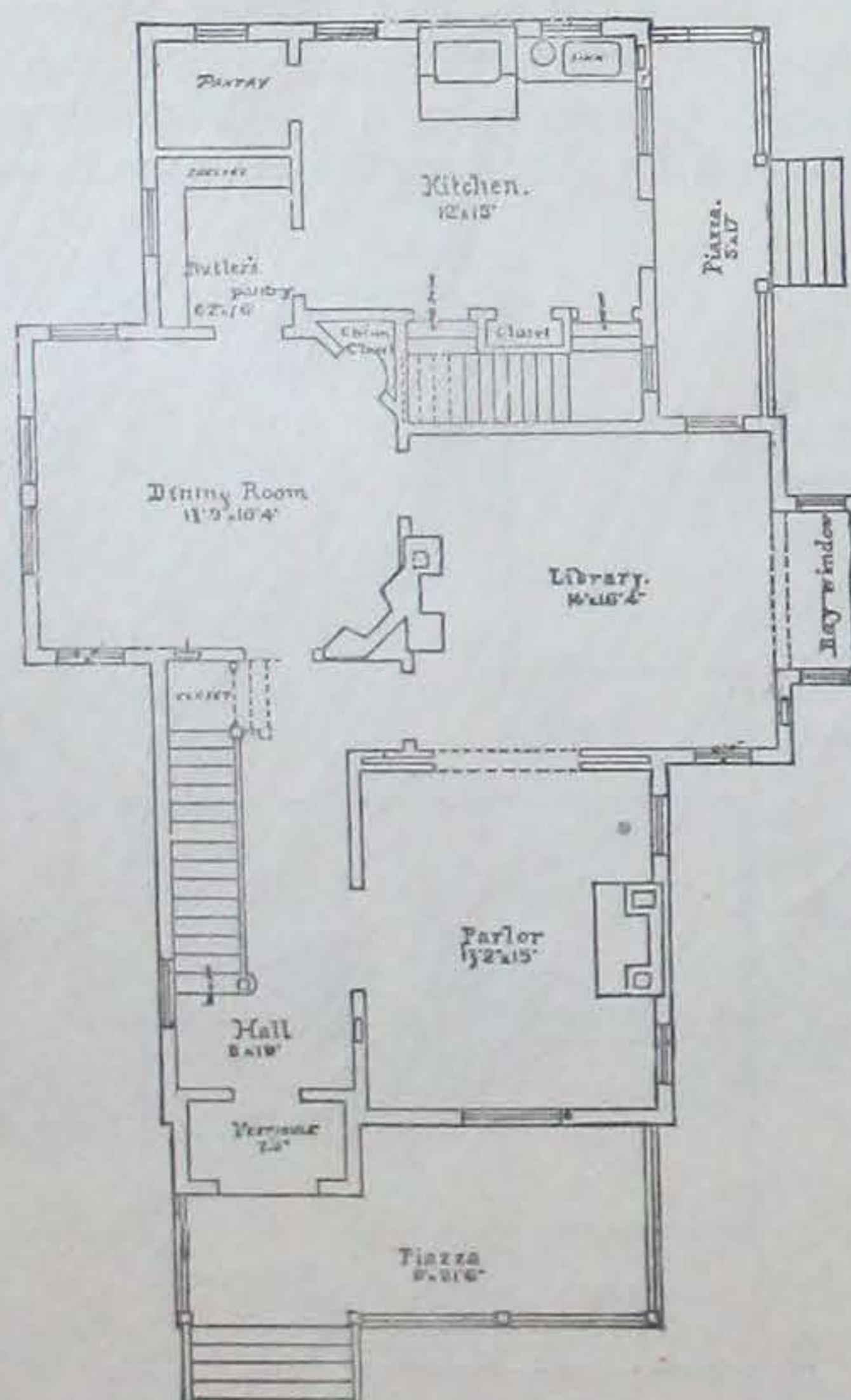
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Cellar under the whole house. In addition to the rooms shown by the floor plans given, three good rooms can be finished off in the attic, still leaving plenty of storage room. A back stairway runs from the cellar to the attic. Heated by open fireplaces in conjunction with a furnace.

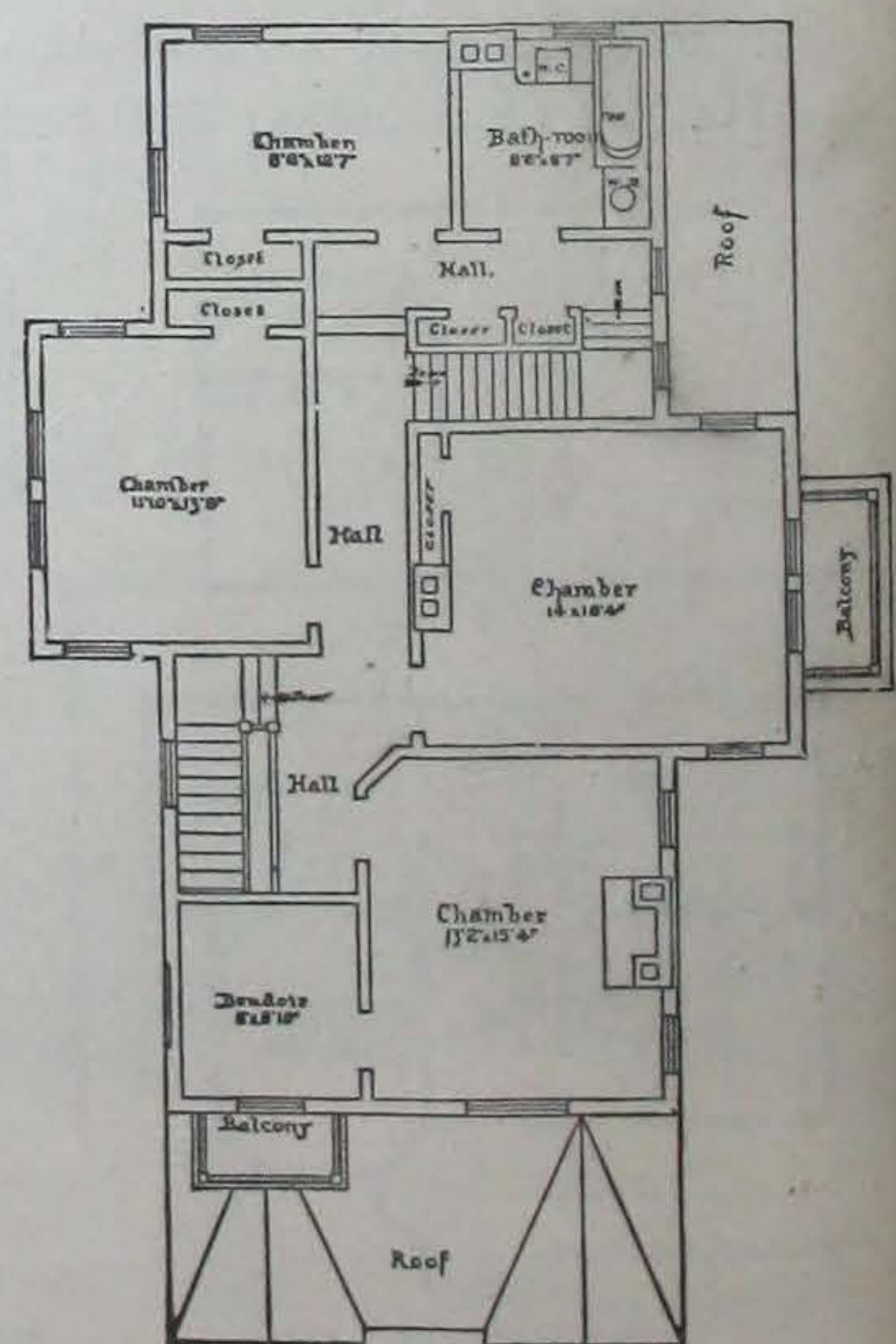
This is a good house for any location, but it is particularly well placed on a corner lot, as the sides are very handsome.

The intending builder who wants a complete and beautiful house need not look much further for a design. The exterior is picturesque and in thorough good taste; the interior is spacious, yet compact—not covering too much ground. The accommodations are complete—all that can be desired in a well-appointed residence.

Well-kept grounds add much to the appearance of a handsome house like this.



FIRST FLOOR. NO. 231



SECOND FLOOR. NO. 231

DESCRIPTION OF DESIGN NUMBER 232

SIZE OF STRUCTURE: Front, 26 ft., 6 in. Side, 54 ft., 4 in., including veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 10 ft.; Second Story, 9 ft.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, clapboards and shingles; Roof, shingles.

COST: \$3,900, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

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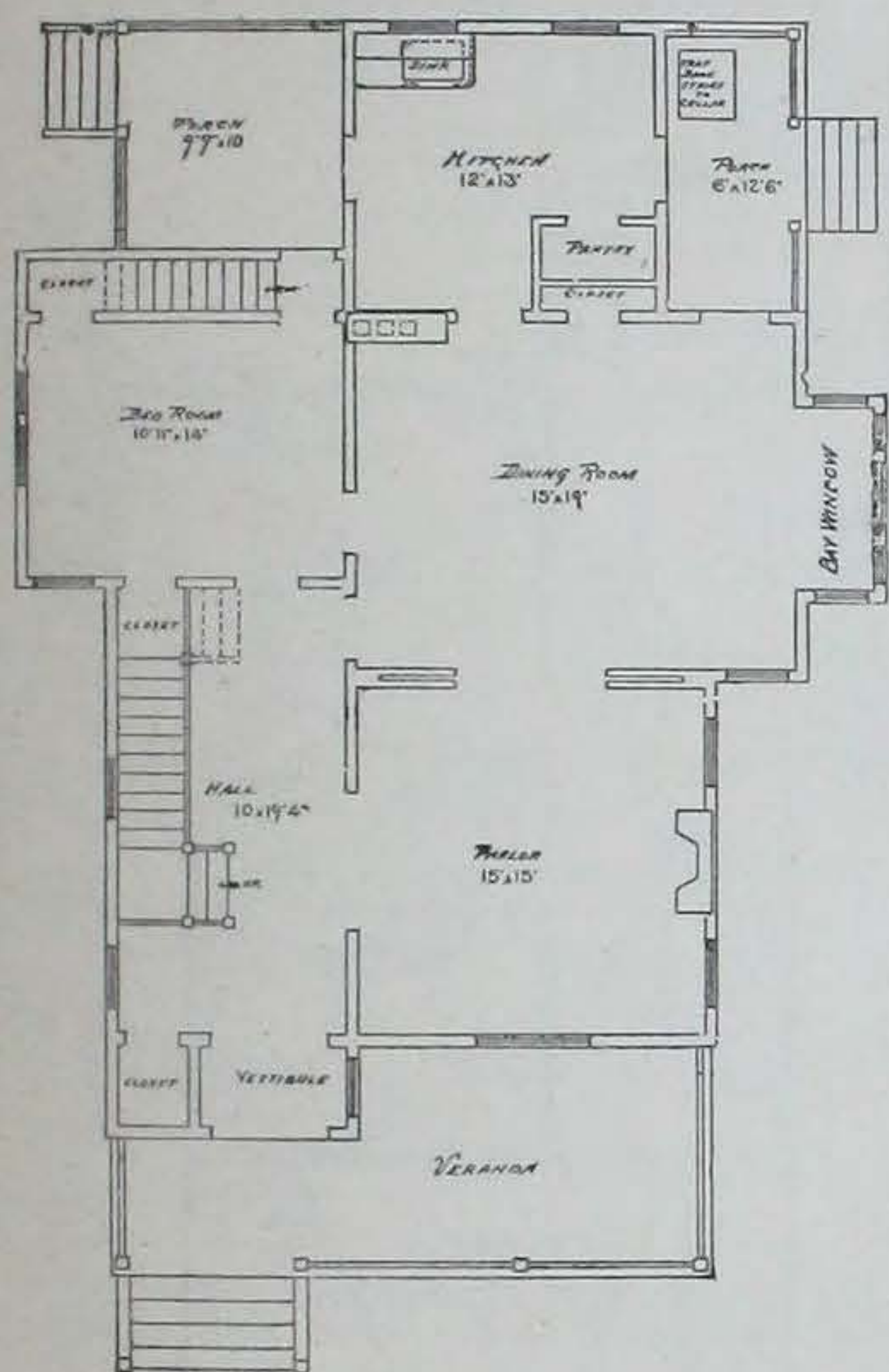
SPECIAL FEATURES.—The external appearance is similar, but a little plainer than the preceding design, Number 231.

Cellar under the kitchen only, but it can be extended under the whole house if desired. The cellar is entered by trap door in floor of side porch. A fireplace in parlor and in the chamber above. It is designed to heat the other rooms by stoves or furnace.

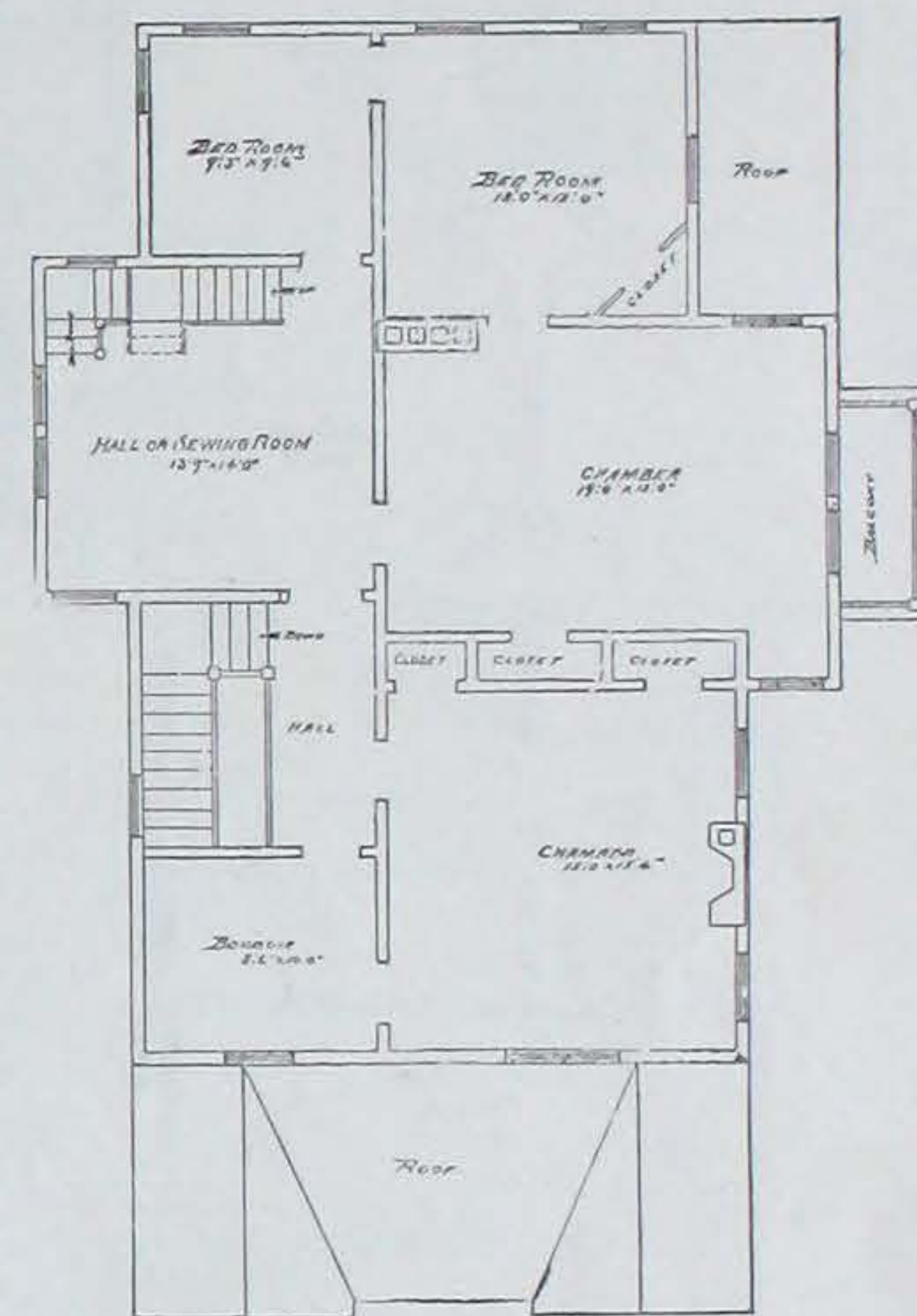
Four good rooms can be obtained in the attic, if desired. The room marked bed-room on first floor will make a good sitting-room or library, in which case it would be well to connect it with the dining-room by a five-foot portière opening.

A large closet in the front hall and a plentiful supply throughout the house.

It is almost impossible to have too many closets. The words, "my wife says she must have plenty of closets," are exceedingly familiar to us through our correspondence.



FIRST FLOOR. NO. 232



SECOND FLOOR. NO. 232

DESCRIPTION OF DESIGN NUMBER 233

SIZE OF STRUCTURE: Front, 23 ft., 8 in. Side, 60 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 10 ft., 6 in.; Second Story, 9 ft.; Third Story, 8 ft.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, clapboards; Roof, shingles.

COST: \$4,500, complete, except grates or heater.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

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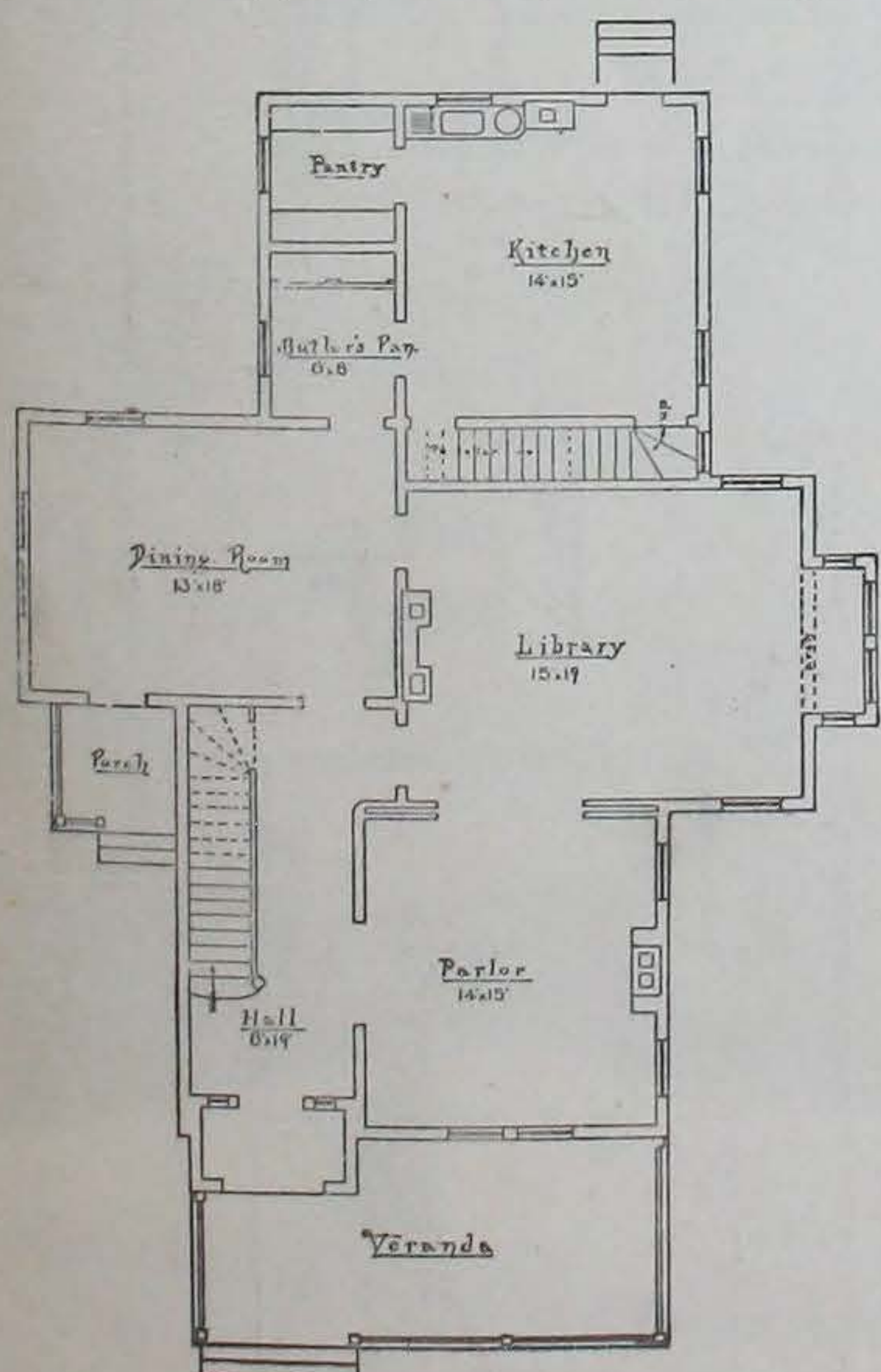
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—This is another modification of the favorite design, Number 231.

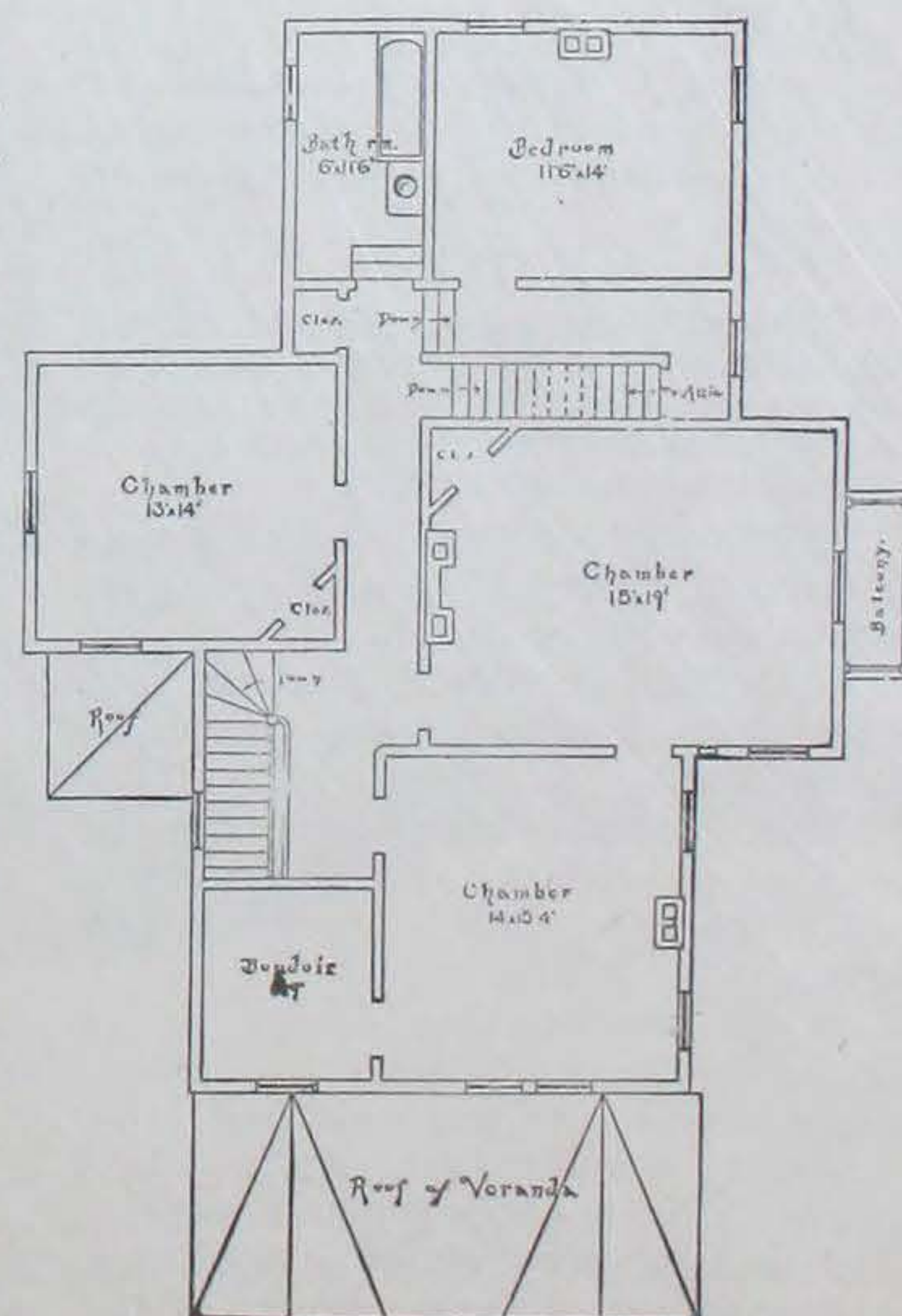
The dining-room, it will be noticed, has a door on the front side opening on to a covered porch—a very pleasant feature. It would be a very simple and inexpensive matter to carry this porch around to the front if more veranda were desired. A large butler's pantry, well fitted up, and a large store pantry.

The vestibule door has side lights of stained glass.

There is a cellar under the whole house. The plans are arranged for heating by a furnace. Three rooms can be finished off in the attic, if required.



FIRST FLOOR. NO. 233

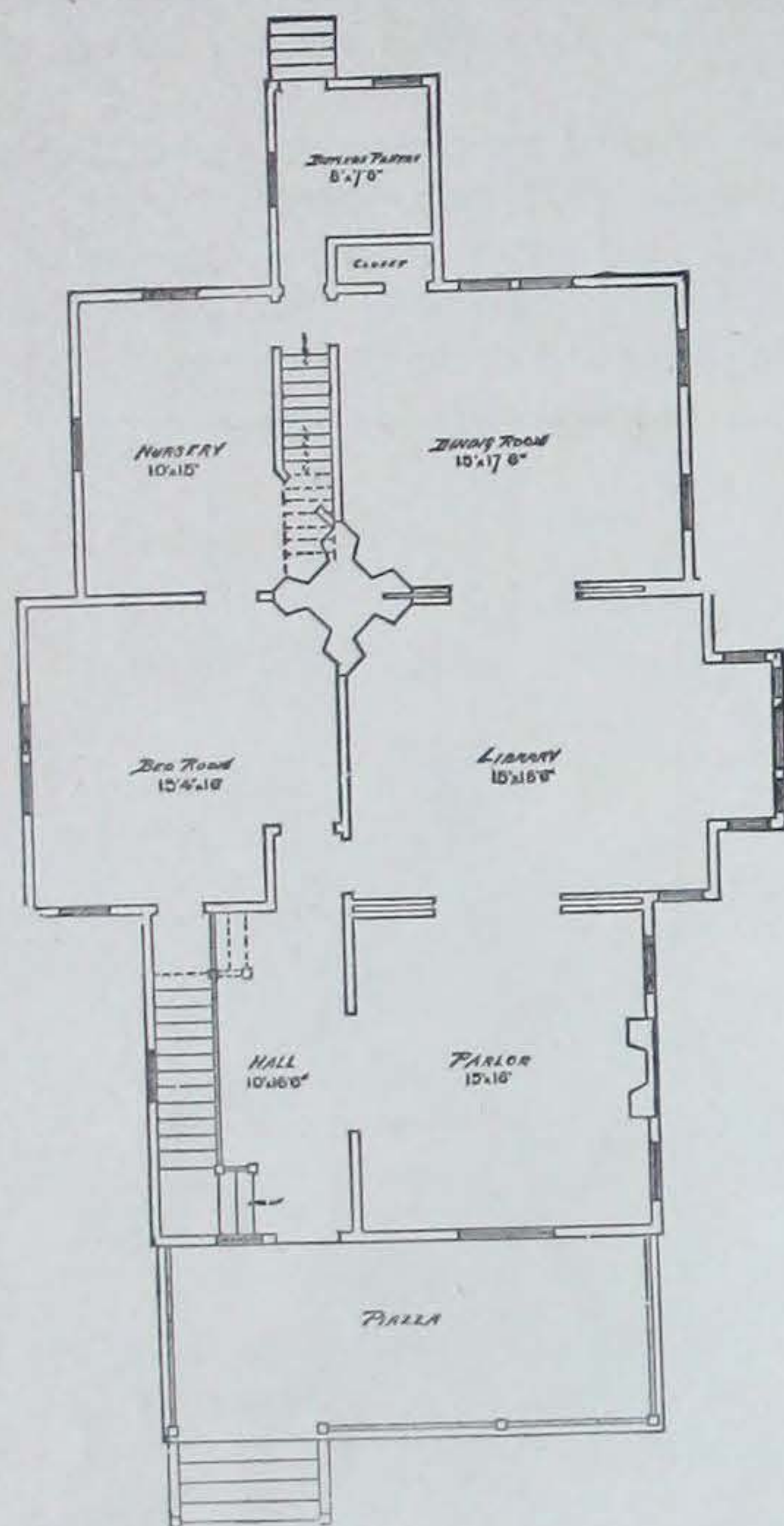


SECOND FLOOR. NO. 233

SHOPPELL'S MODERN HOUSES

DESCRIPTION OF DESIGN NUMBER 234

SIZE OF STRUCTURE: Front, 26 ft., 6 in. Side, 69 ft., including veranda and butler's pantry.



FIRST FLOOR. NO. 234

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 11 ft.; Second Story, 10 ft.

MATERIALS: Foundation, brick piers; First Story, frame; Second Story, frame; Gables, shingled and panelled; Roof, shingled.

COST: \$3,900, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

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tinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

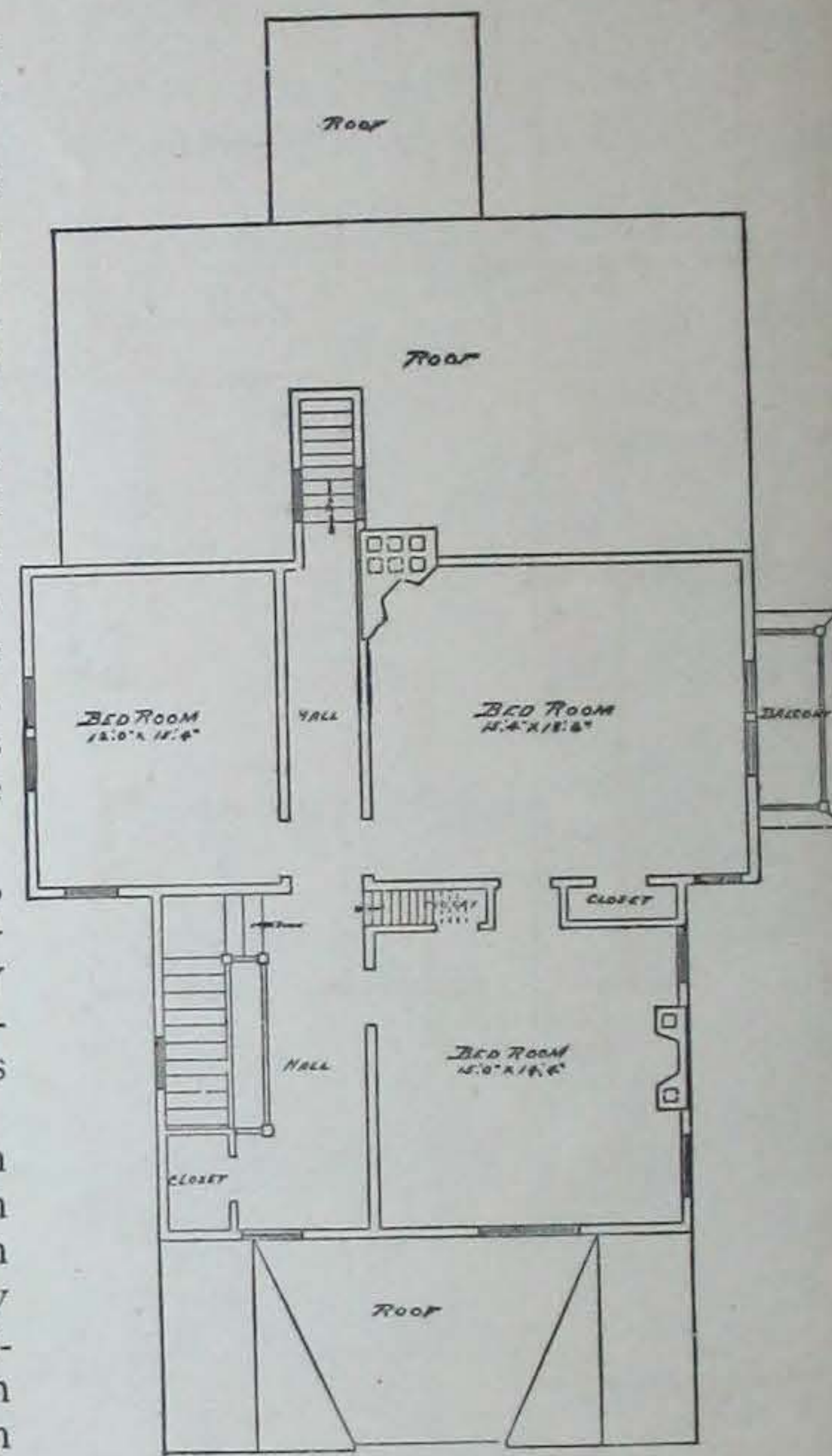
SPECIAL FEATURES.—

This is another modification of Number 231. Being designed for the South there is no cellar, and the kitchen is placed in a detached building. The nursery can be used as a kitchen, if preferred; it can be so thoroughly separated that no kitchen odors will pervade the rest of the house.

All of the rooms are large and well ventilated. Three additional rooms can be finished off in the attic.

The cost of this house, by contract, in North Carolina, recently reported by a client (who declares himself much pleased with his house) was \$3,000.

The cost of building, in almost all of the Southern States, is much less than in the North, and for many regions one-quarter to one-third, or even more, can safely be deducted from our figures of cost.



SECOND FLOOR. NO. 234

DESCRIPTION OF DESIGN NUMBER 235

SIZE OF STRUCTURE: Front, 28 ft., 8 in. Side, 76 ft., 6 in., including both front and rear verandas.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 11 ft.; Second Story, 10 ft.; Third Story, 8 ft.

MATERIALS: Foundation, brick piers; First Story, clapboards; Second Story, shingles; Roof, shingles.

COST: \$5,100, complete.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

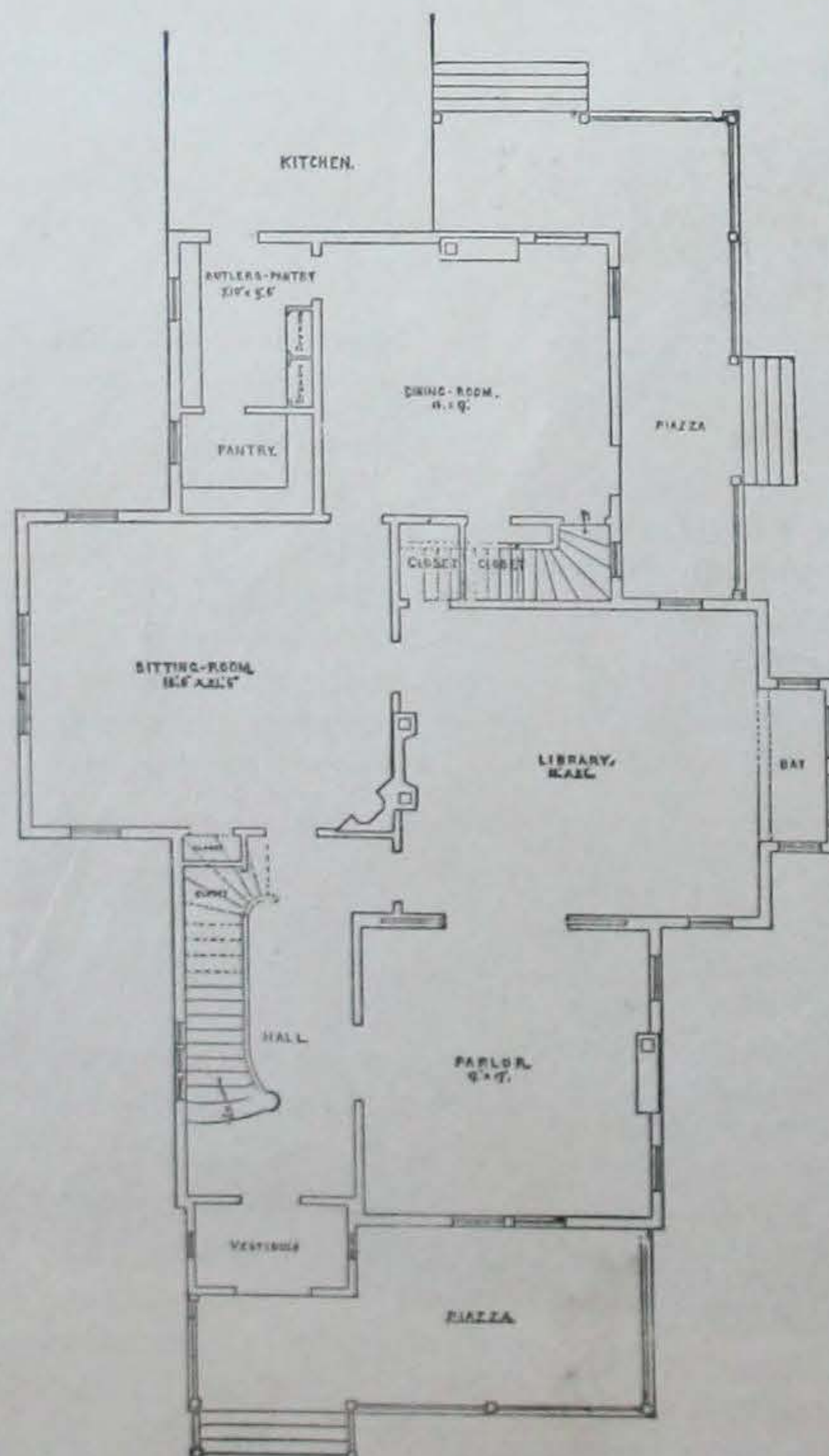
The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost.

SPECIAL FEATURES.—Another modification of Number 231, designed for and erected in the South.

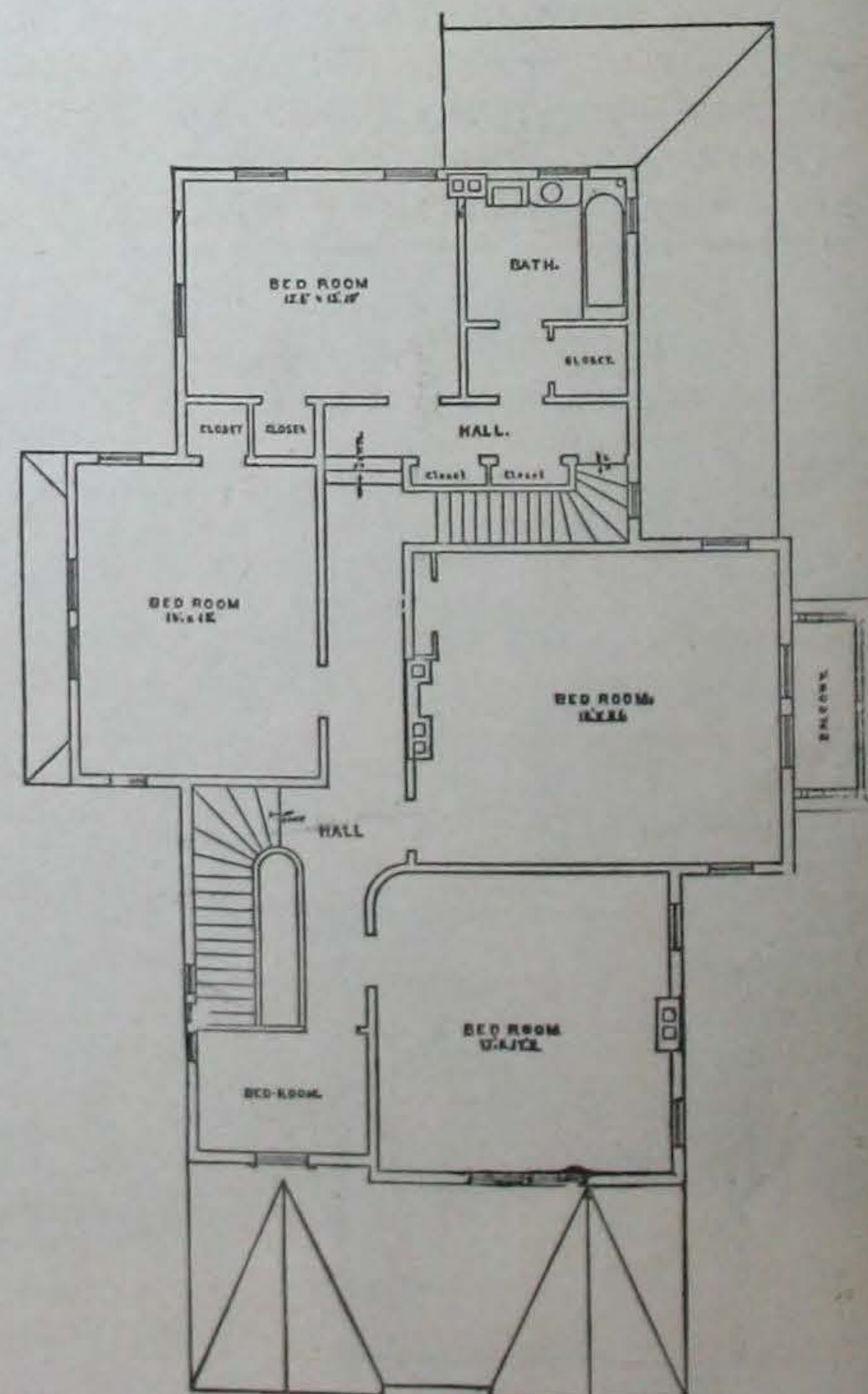
No cellar, detached kitchen, very large rooms and open fireplaces throughout.

The present dining-room can be used as a kitchen, and the present sitting-room as a dining-room, if preferred.

A feature of this design is an observatory or "look-out," placed above the ridge of the main roof, large enough to accommodate six or eight persons. It is shown in our working plans, but it can be left off, if preferred, without injury to the symmetry of the design.



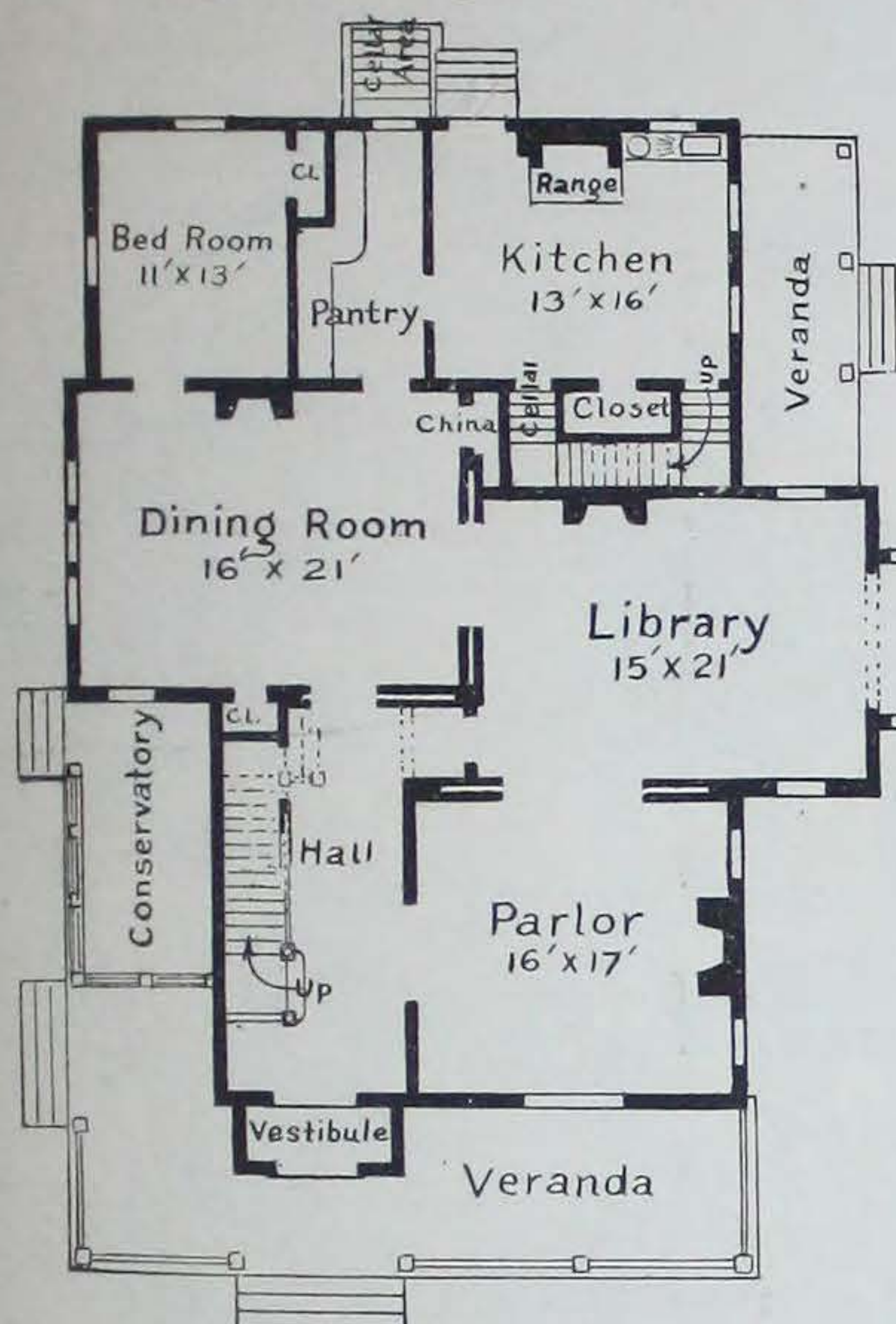
FIRST FLOOR. NO. 235



SECOND FLOOR. NO. 235

DESCRIPTION OF DESIGN NUMBER 236

SIZE OF STRUCTURE: Front, 37 ft., including veranda. Side, 62 ft., including veranda.



FIRST FLOOR. NO. 236

SIZE OF ROOMS:
See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 11 ft.; Second Story, 10 ft.; Third Story, 8 ft., 6 in.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, clapboards and shingles; Gables, shingles; Roof, slate.

COST: \$5,900, complete, except range, furnace and grates.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

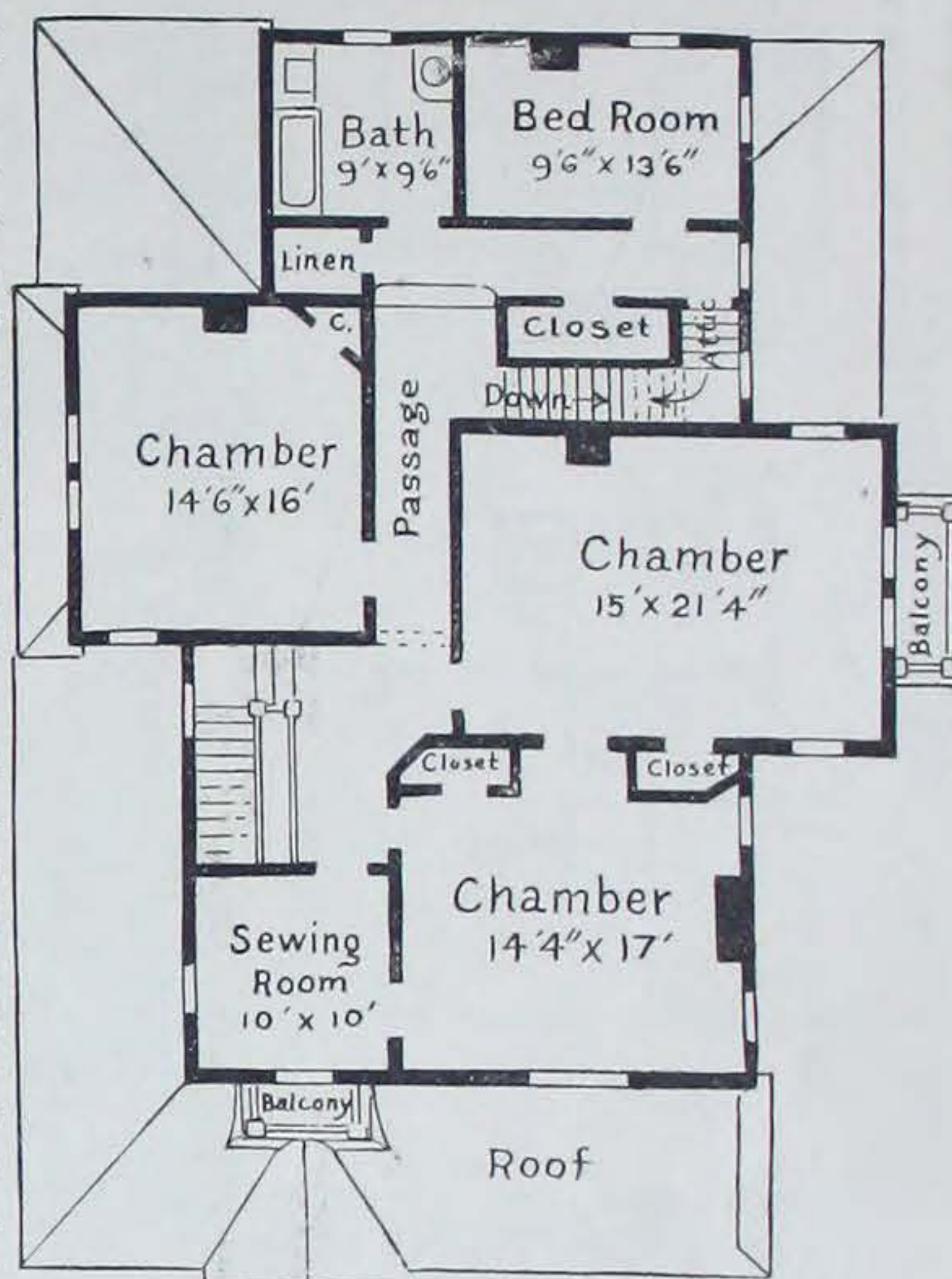
The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other

localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

SPECIAL FEATURES.—This is another modification of Number 231. Cellar under the whole house, with inside and outside access to it. Three rooms are finished in the attic. The laundry with stationary tubs is placed in the cellar; there is a back stairway from cellar to attic.

This house has large rooms, with wide openings and sliding doors between, on the first floor, open fireplaces, a fine conservatory heated from the furnace, and the amplest of closet room. The linen closet in second story has a clothes shoot direct to the laundry in the cellar.



SECOND FLOOR. NO. 236



THE VIRGIN TRACT

ENTERPRISE AND IMPROVEMENT

IN this country, two good genii named Enterprise and Improvement perform feats as wonderful as those related in the Arabian Nights. They reclaim the wilderness literally, making it blossom as the rose. They build a few houses on a virgin tract; next year they will build a few more; the third year still more; the fourth year a great number; the fifth year a still greater number, and establish a water supply, a sewerage system and gas works, and so on, until a populous town extends through the valley and climbs

up the sides of the hills. A distant mountain top, outlined against the sky, is all that is left of the virgin tract. In the foreground and on all sides now, are churches, schools, homes, stores, factories, telegraph offices, railways and shipping.

The good genii may do all this in ten years, or they may require the life-time of a generation, but at every yearly stage of their work the results are surprising and beneficial.

Owners of virgin tracts should invoke the aid of Enterprise and Improvement.



THE POPULOUS TOWN



DESIGN No. 237. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 237

SIZE OF STRUCTURE: Front, 37 ft., 2 in. Side, 42 ft., 2 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft., 4 in.; Third Story, 7 ft., 8 in.

MATERIALS: Foundation, brick and stone; First Story, clapboards; Second Story, clapboards; Gables, shingled and panelled; Roof, shingled.

COST: \$4,500, complete, except heater, or grates, or heater piping.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

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This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Cellar under the whole house, well lighted and with inside and outside stairway to it.

A fine arrangement of rooms both for appearance and convenience.

The front hall is unobstructed by stairs; the large openings connecting it with the rooms make it practically a part of them when the doors or curtains are thrown open, which they are likely to be much of the time, because of the pleasant effect thus produced.

The fireplaces and mantels in the corners of the rooms are advantageously placed, as they thus occupy places that are not of much value otherwise; at the same time, an excellent appearance is obtained, with economy of construction, as one chimney suffices for the two fireplaces, or even more, as in design Number 190.

The effect of the angle mantels may be seen on page 20.

The staircase is located at the rear end of the hall, and its beautiful newels and balustrades are in full sight as the house is entered. Two steps, facing front, lead to a square platform, on which a door opens to a hat and cloak closet.

Underneath the stairway is a passage which gives access to the front hall from the kitchen, and from which also a door opens to the side porch.

The connection between kitchen and dining-room is through a butler's pantry, in which is a dresser, with shelves for china, and drawers underneath for table linen, also a shelf to set the serving trays upon. A dumb-waiter connects kitchen and cellar.

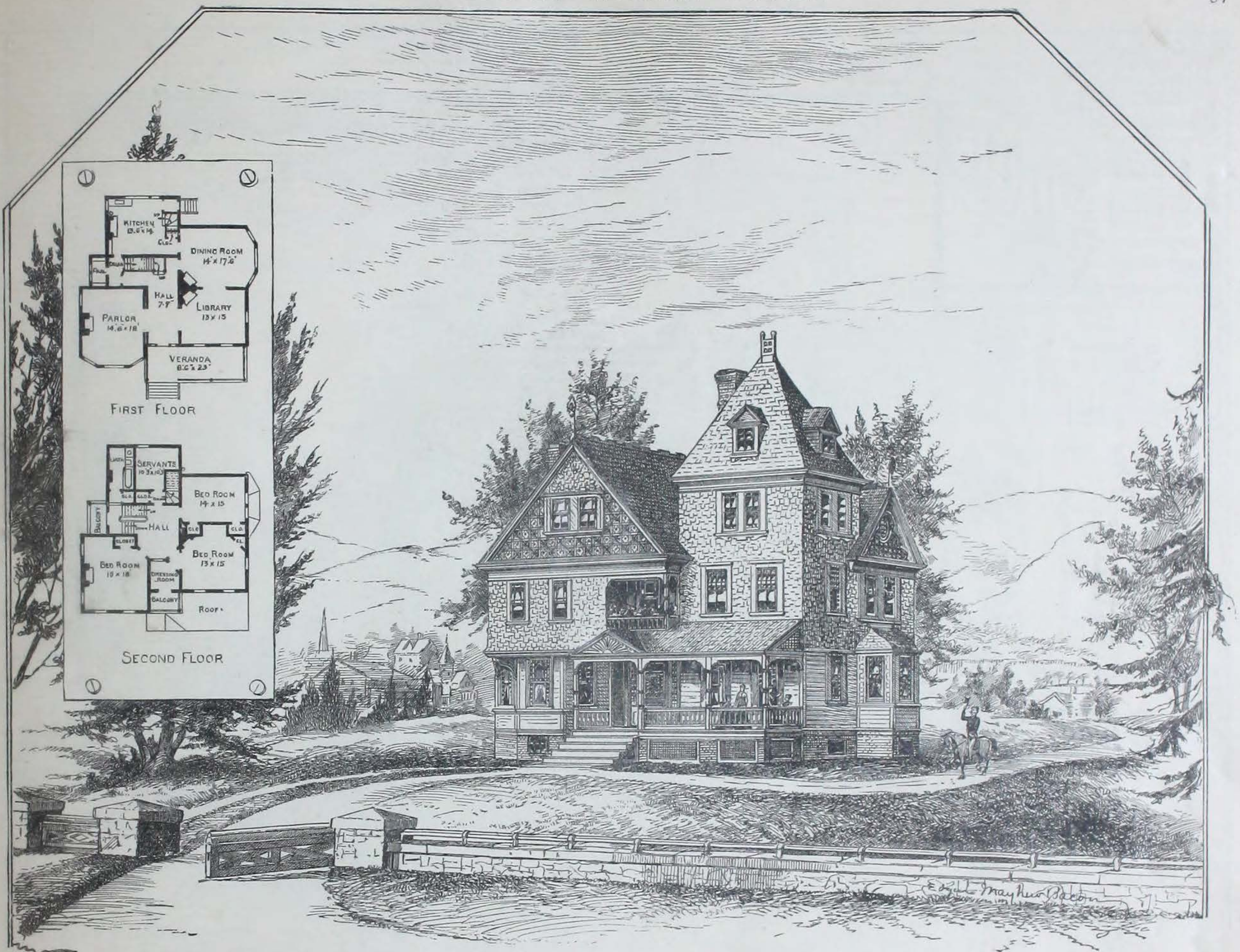
A servant's stairway to second floor is considered unnecessary, but should it be desired it can be obtained by sacrificing the dumb-waiter and small kitchen closet, and the hall closet in the second story. The second floor is no less conveniently arranged than the first floor. A spacious hall, well lighted, from which all the rooms are entered, plenty of closets, good bath-room, provided with tub, w.c. and marble wash bowl.

Three large bed-rooms are obtained in the attic.

A word as to the location of rooms in reference to the points of the compass. The dining-room—an important room, that cannot receive too much consideration—should always have an eastern exposure, where practicable, or at least have a large window facing the east, that the rays of the morning sun may penetrate it.

It should have windows toward the south also. A sitting-room or any other room that is much used should have a Southern or Eastern exposure.

A parlor or drawing-room being more for evening uses, may be placed on the north and west sides. It is not important that the hall should be so placed as to receive the direct sunlight, although, if possible, every part of a house should be so arranged that the sunlight can be admitted freely. For this reason verandas should not surround a room, except in a hot climate where shade is the great desideratum.



DESIGN No. 238. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 238

SIZE OF STRUCTURE: Front, 39 ft., 6 in. Side, 44 ft., 6 in., including veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft., 6 in.; Second Story, 9 ft.; Third Story, 8 ft., 6 in.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Gables, panelled; Roof, shingles.

COST: \$5,800, complete, except mantels, grates and furnace.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—The cellar extends under the whole house, the part under the kitchen being used as a laundry and fitted with stationary tubs.

The hall is in the center with the staircase well back yet showing its beauties. Double sets of doors opposite each other connect the parlor and library with the hall, affording a long vista—a charming feature.

Fireplaces are provided in all rooms in first story and in the two front chambers. Side lights and fanlight of stained glass ornament the entrance and light the hall.

The floors are stained and finished for use of rugs.

In second story are four bed-rooms and bath-room, and an abundance of closets, each bed-room having one or more. Front bed-room has a good-sized dressing-room or boudoir, from which the front balcony is reached.

A large room is obtained in the tower, and two more rooms can be finished off in the attic if desired. The tower room makes an admirable billiard room.

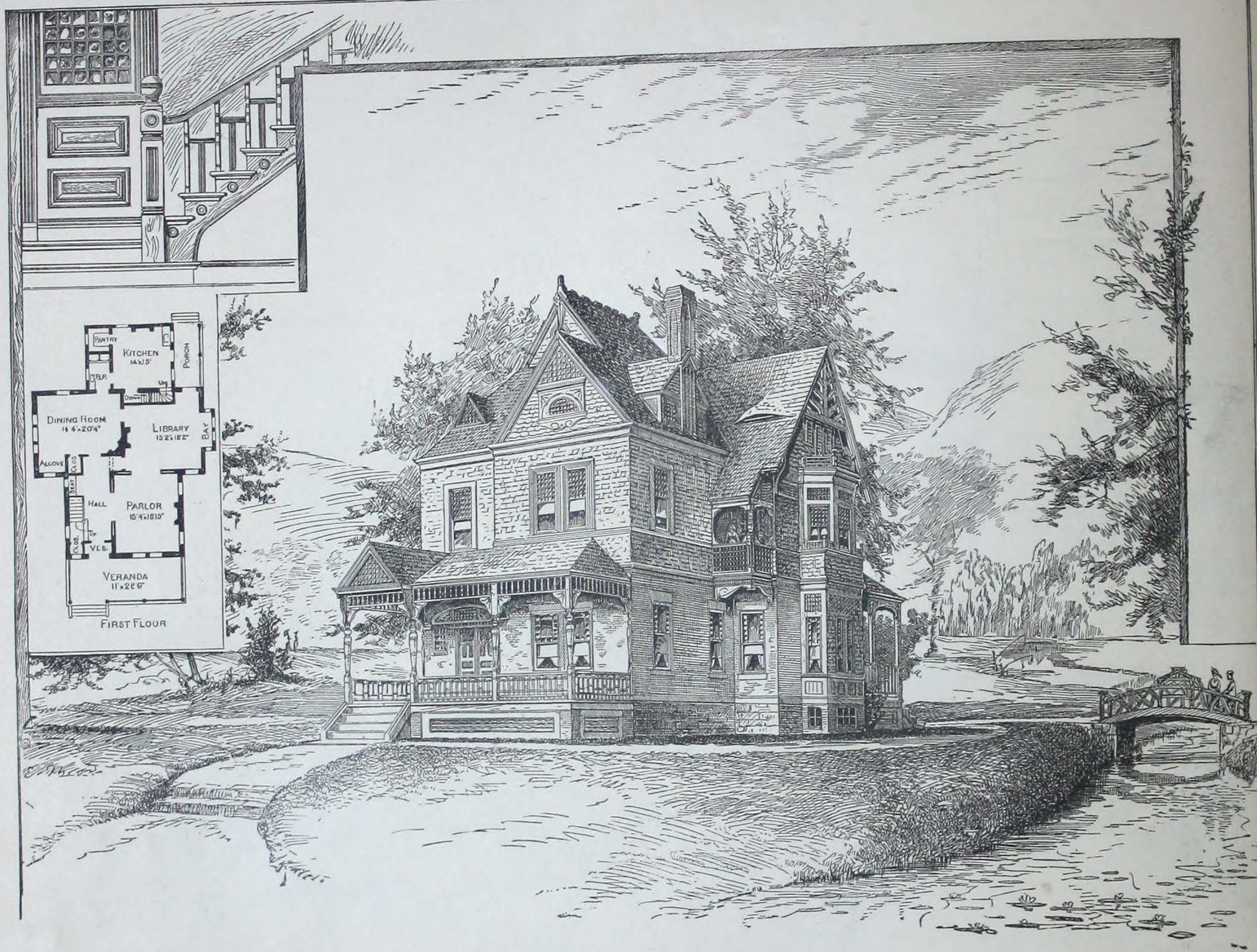
The shingles of the outside walls and of the roof are stained red or brown.

The interior woodwork is of handsome design; in first story whitewood stained and in the second story pine natural finish.

We give a small view of this design as it appears with the tower omitted, which reduces cost \$400, and is preferred by many.



VIEW OF NO. 238. WITHOUT A TOWER



DESIGN No. 239. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 239

SIZE OF STRUCTURE: Front, 28 ft., 6 in. Extreme width, 44 ft. Side, 55 ft., 6 in., not inclusive of veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 12 ft.; Second Story, 11 ft.; Third Story, 10 ft.

MATERIALS: Foundation, stone; First Story, brick; Second Story, shingles; Roof, slate.

COST: About \$6,800, complete, except grates and heater.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

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This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Cellar under the whole house.

Off the first landing of the stairway (a glimpse of which is shown in one corner of the large cut), there is a convenient hat and coat closet.

Stained glass in the hall and over the staircase, and in transom lights over the front door and the dining-room bay-windows.

The alcove under the upper part of staircase has a small window and is fitted up with an upholstered seat. There is a similar alcove in dining-room.

Open fireplaces throughout first story and in the front bed-room of the second story.

Sliding doors between hall and parlor, and parlor and library.

Four large bed-rooms in attic, besides a hall and storage room.

The first story is brick, laid up in red mortar. The shingles on the sides of the building are stained a yellowish brown. The trimmings, cornices, &c., are maroon. The piazza balcony and front door, dark green. The roof crestings, deep red, to contrast with the slate.

The facing of the foundation walls is of cut stone. The kitchen extension is built entirely of wood.

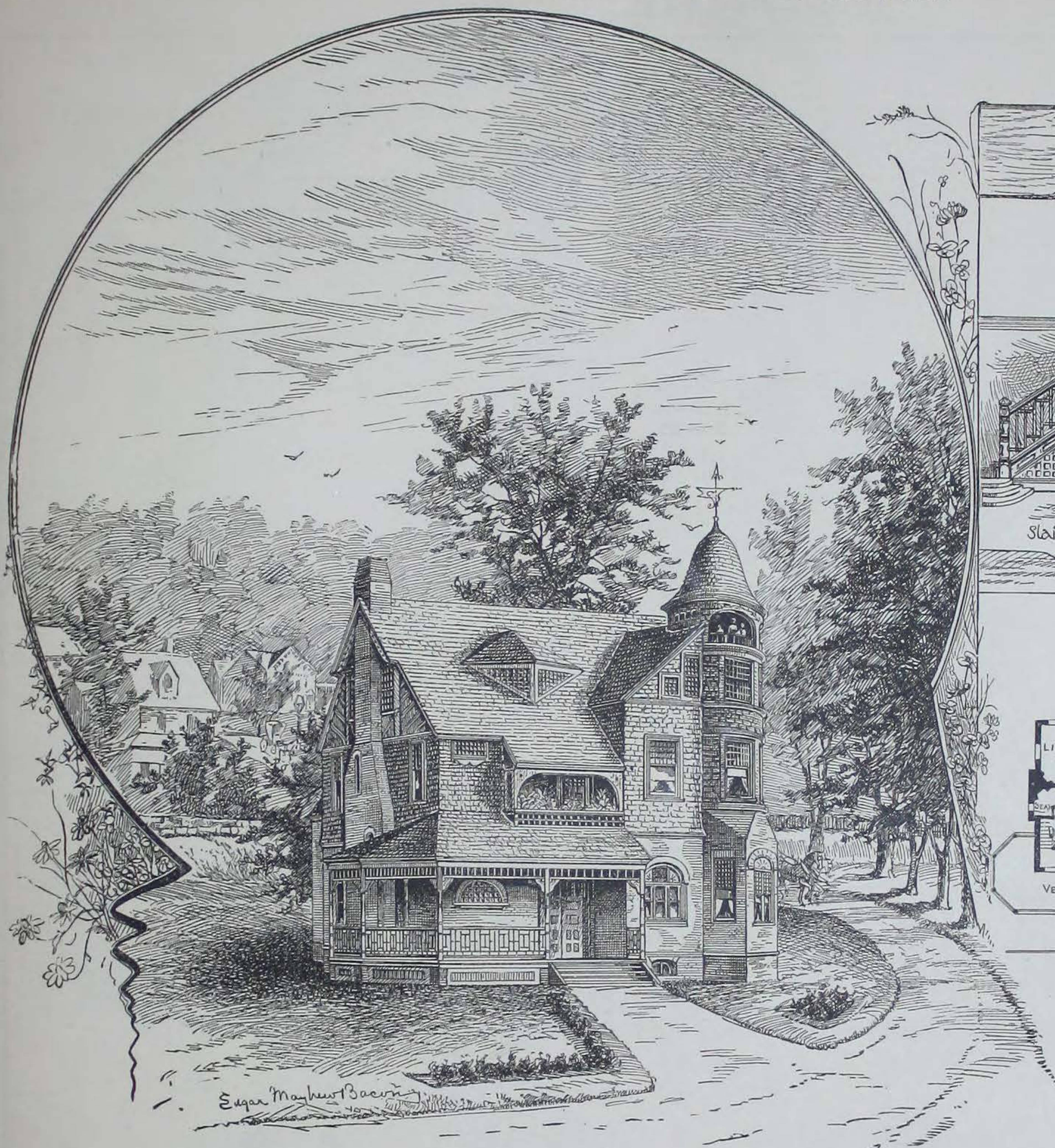
The interior trim of first story may be of oak, ash, cherry, or other cabinet woods—that of second story of yellow pine, stained and polished, very beautiful in effect.

The stories being high and the rooms large, this house is well adapted for the South.

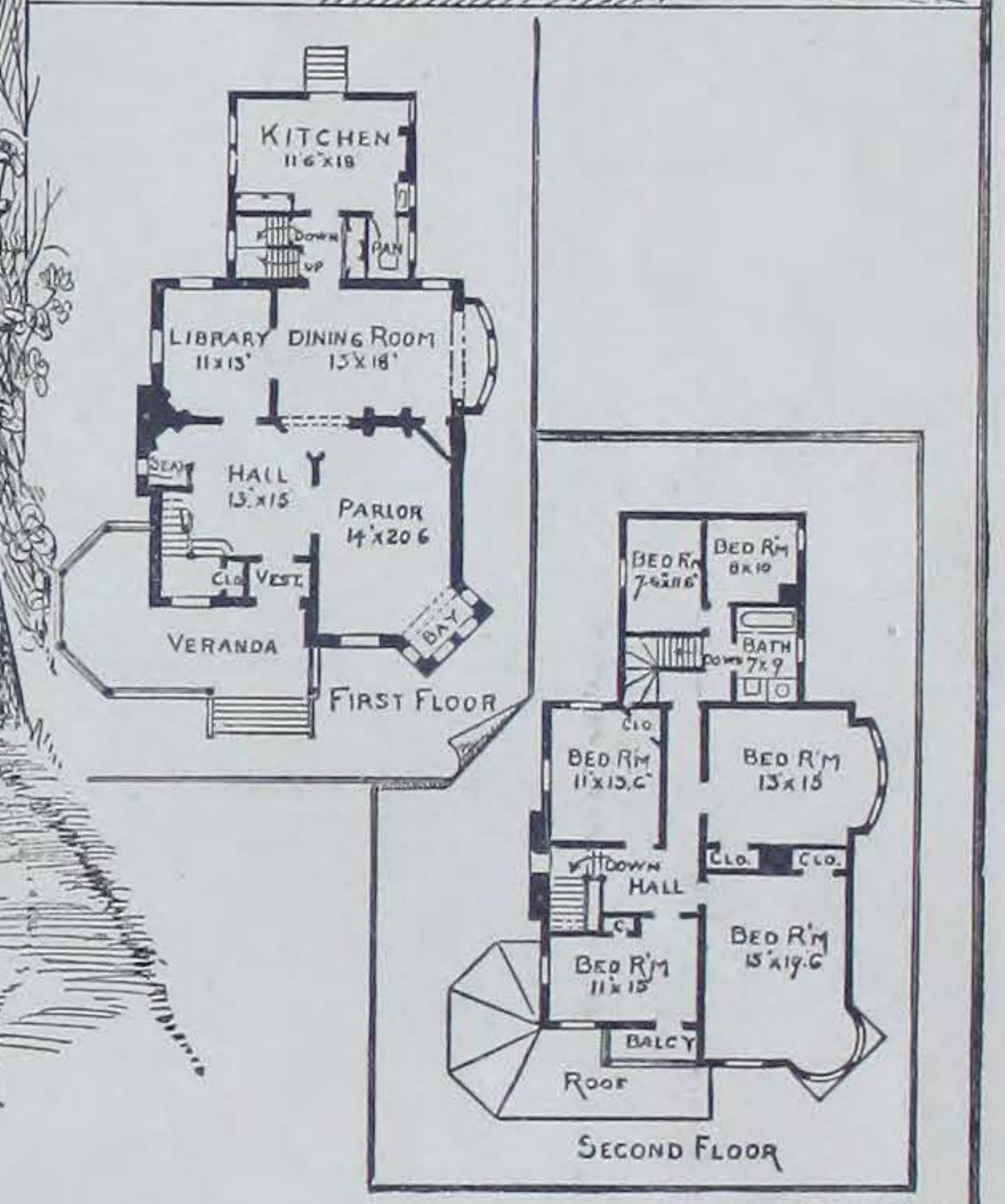
The interior details are elaborate and artistic.



SECOND FLOOR. NO. 239



Stairway and Chimney Nook in Hall



DESIGN No. 240. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 240

SIZE OF STRUCTURE: Front, 32 ft. Side, 56 ft., not inclusive of veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft., 6 in.; Second Story, 9 ft.; Third Story, 9 ft.

MATERIALS: Foundation, brick and stone; First Story, brick; Second Story, shingles; Gables, timber and cement; Roof, slate.

COST: About \$6,700, complete, including grates, heater, etc.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, on our Working Drawings, and careful directions for their execution are given in our Specifications.

SPECIAL FEATURES.—Cellar under the whole house. The first story is built of brick, laid up in red mortar, the walls above the first story are frame covered with redwood shingles, the rear part all frame. The interior finish of first story is hardwood. Elsewhere, white or yellow pine.

Large fine hall, beautiful staircase and a charming chimney nook under the staircase with seat and window.

Large parlor and dining-room, both having large bay-windows.

Back stairway from cellar to attic. Butler's pantry with sink, cupboards and drawers between dining-room and kitchen. Elevated range and best plumbing.

Vestibule door glazed with beveled plate or cathedral glass. Open fireplaces throughout first story, and can be obtained in second story also.

One of the pleasantest rooms in this house is that in the attic, in the angle where the circular tower is, and from this room a small staircase leads to the open observatory above.

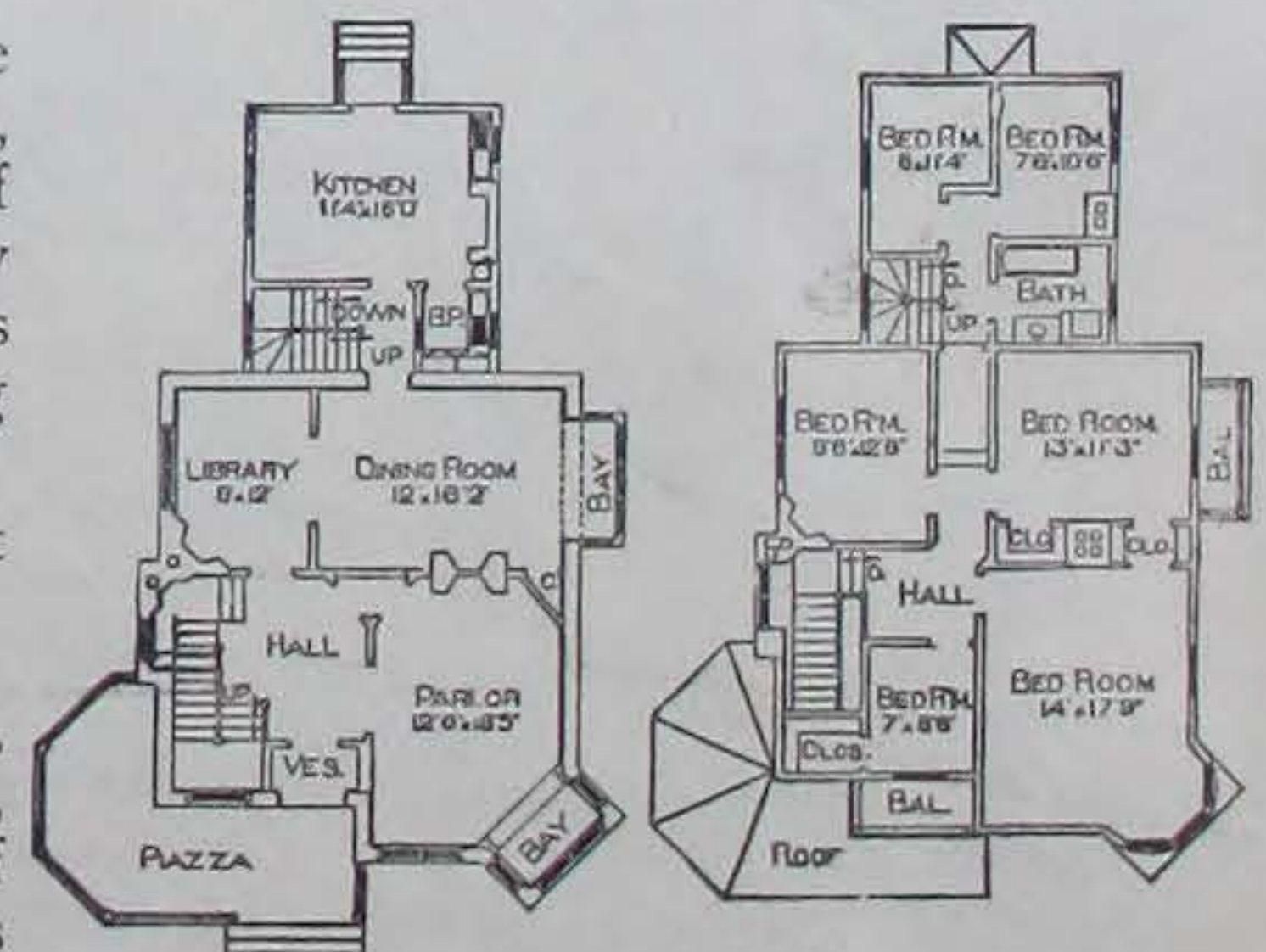
In the attic story there are five rooms.

DESCRIPTION OF DESIGN NUMBER 241

The exterior is in the same style as Number 240, and the arrangement of rooms is similar, but they are reduced in size, as shown on accompanying plans.

COST: \$5,800, except furnace and grates.

With a plainer finish, omission of attic rooms, and the cellar under half of house only, the cost is reduced about \$500.



FIRST FLOOR. NO. 241 SECOND FLOOR, NO. 241



DESIGN No. 242. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 242

SIZE OF STRUCTURE: Front, 43 ft. Side, 56 ft., inclusive of veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft.; Third Story, 8 ft.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Roof, slate.

COST: \$6,500, complete, except mantels, grates and heater, also omitting one of the bath-rooms.

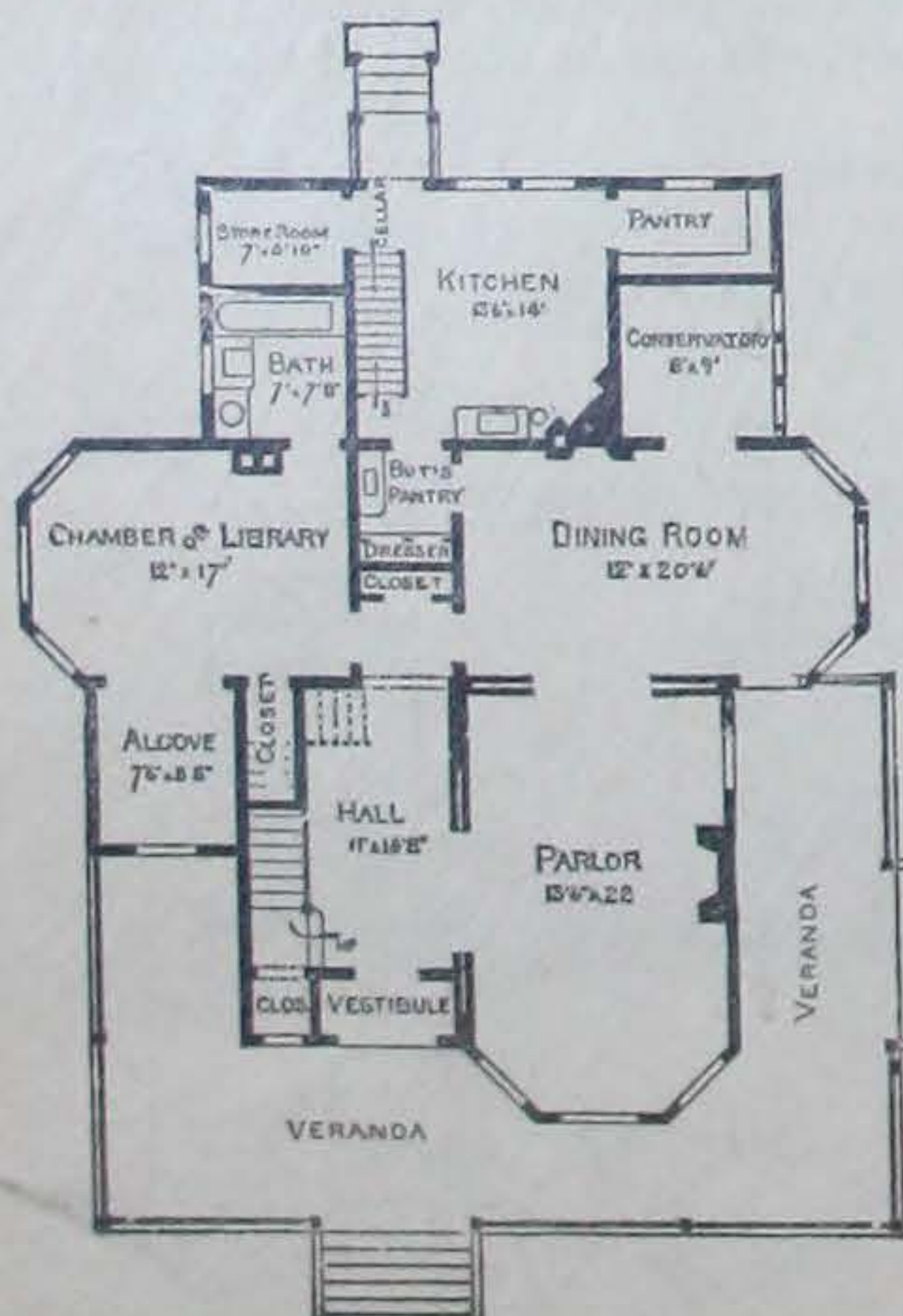
[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—Cellar under the whole house and three rooms in the attic, beside storage room.

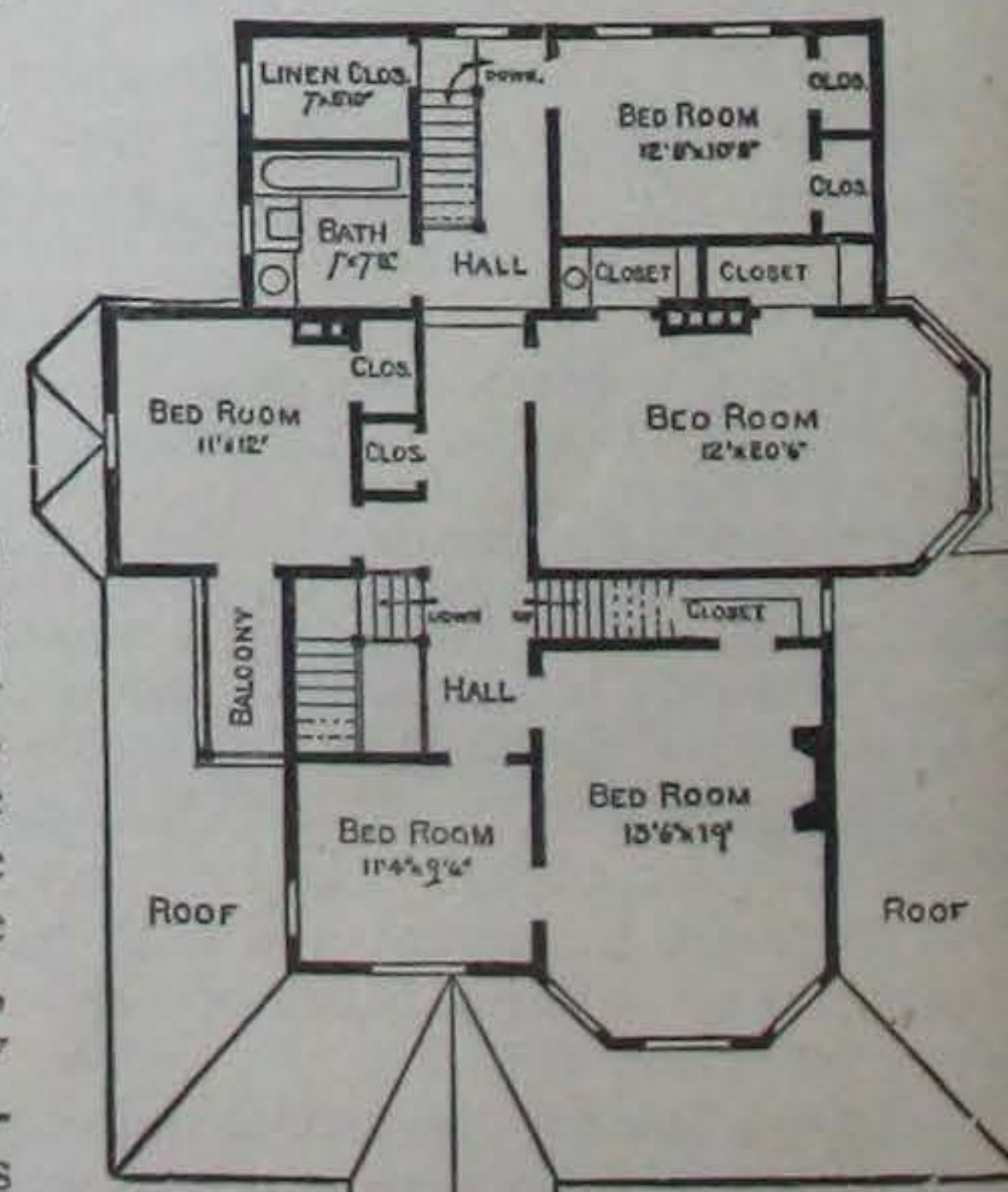
Well adapted for the seaside; also an admirable design for a permanent residence. The exterior is very elegant and the accommodations meet every requirement of a large family of cultivated tastes.

The hall is large and lighted by plate glass in the vestibule door; the staircase is beautiful in design and of very easy rise.

If there is an invalid in the family the arrangement will be found to be perfect. The large chamber with bath connecting, on the first floor, affords every comfort and convenience. If preferred, this room can be used as a library.



FIRST FLOOR. NO. 242



SECOND FLOOR. NO. 242



CHAPEL DESIGN No. 243. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 243

SIZE OF STRUCTURE: Front, 30 ft. Side, 66 ft., 8 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 27 ft.; Lecture-Room, 19 ft.; Rear Rooms, 11 ft.

MATERIALS: Foundation, stone, up to roof; Gables, stone; Roof, shingled.

COST: \$6,000, complete, except seating and heating.

[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

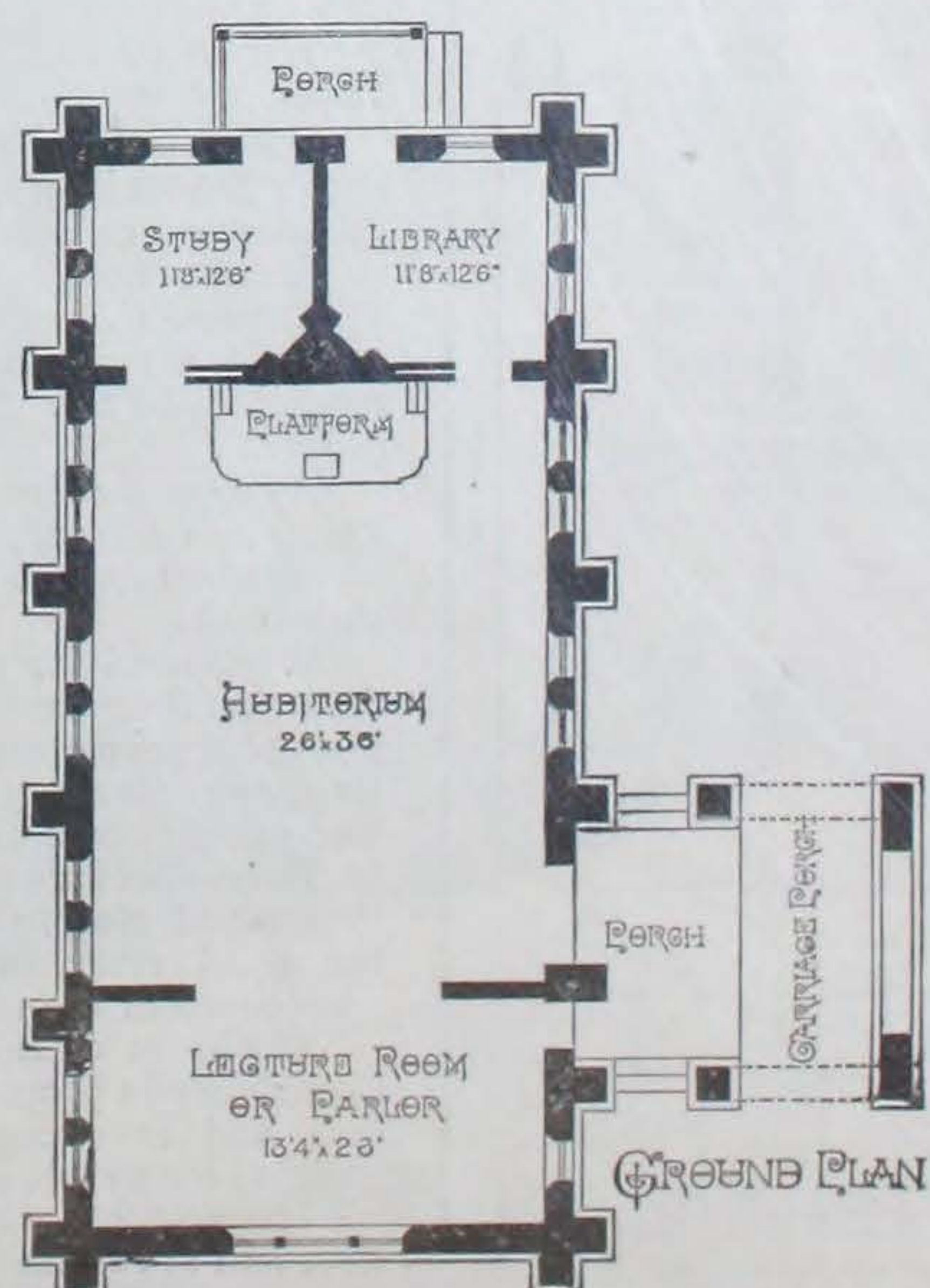
The cost is figured from prices of material and labor in the neighborhood of New York City, October, 1885. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

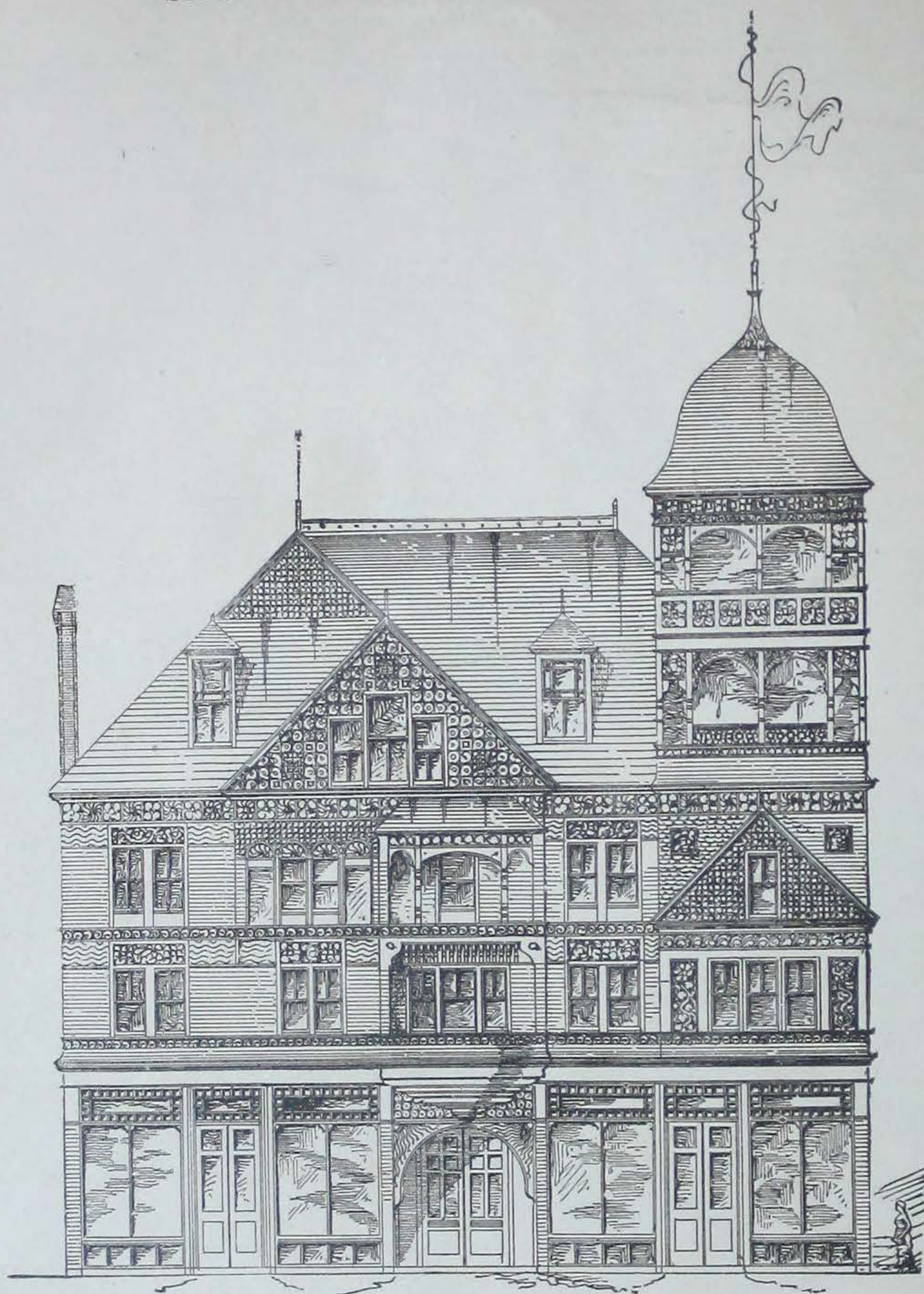
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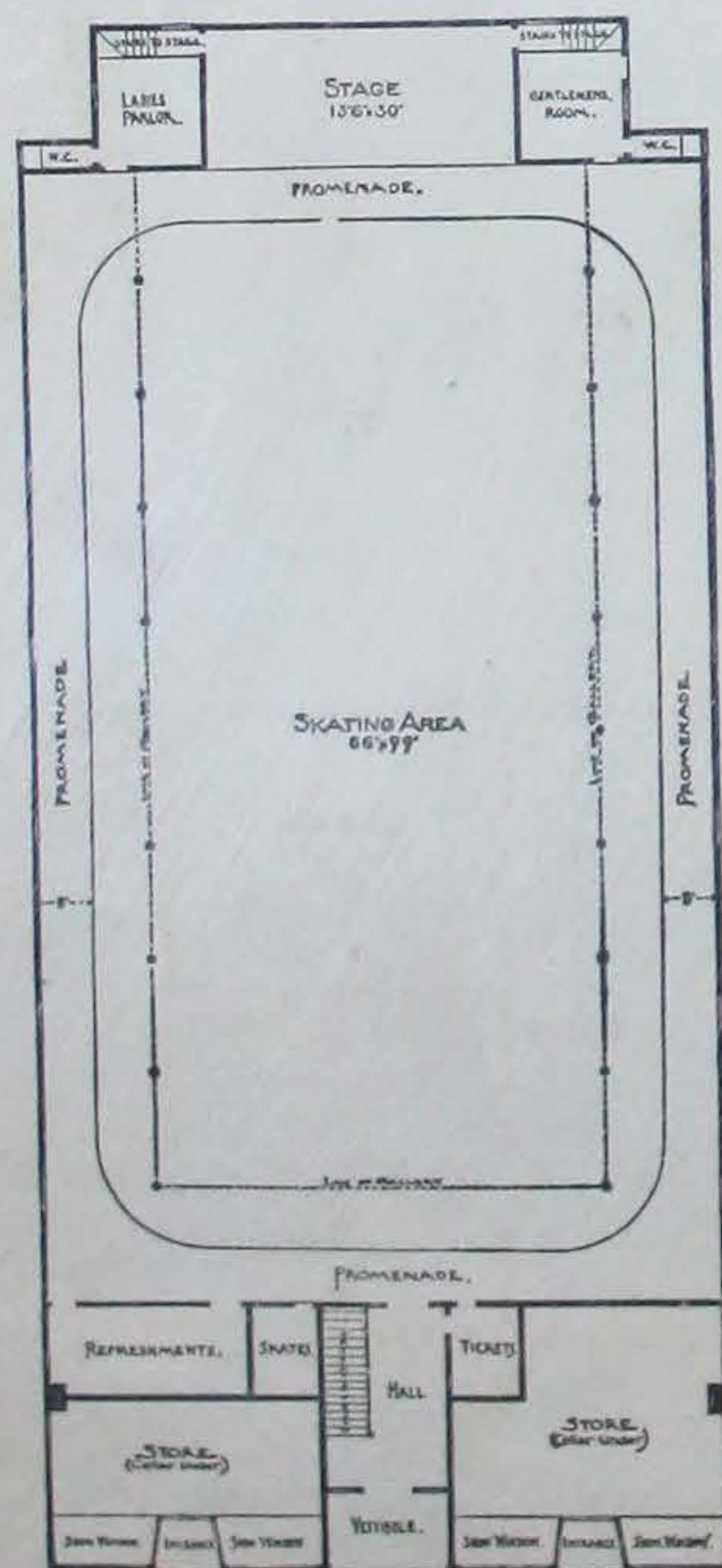
SPECIAL FEATURES.—Cellar under half of structure, with outside entrance. Has seating capacity of 160, without crowding. Large opening in partition for doors or curtains makes the lecture-

room practically part of auditorium. This room will seat about 70 people in addition. Heated by a furnace in the cellar.





DESIGN No. 244, RINK. FRONT ELEVATION.



FIRST FLOOR. NO. 244. RINK

DESCRIPTION OF SKATING RINK NUMBER 244

COST: About \$12,000.

WIDTH OF BUILDING, 67 ft.
Depth, 150 ft.

FOUNDATION, brick; all above foundation, clapboards, shingles and carbography.

Skating area, 56x99 ft., or 5544 square ft., exclusive of the 5 ft. wide promenade which extends around the skating area proper.

As a good stage 13 ft., 6 in. x 30 ft., is provided, this makes an excellent hall for concerts or theatricals.

When used for religious or theatrical purposes the floor seats 1275 people, after allowing for a 4 ft. aisle down the centre. The galleries seat 525 more.

Four offices are obtained in the second story, the same in the third story, and janitor's apartments in the fourth story.

The front of this design is very showy in proportion to its cost and is strongly recommended for a store front.

The cost of a hard maple floor laid in the most approved

manner is included in the above estimate of cost.

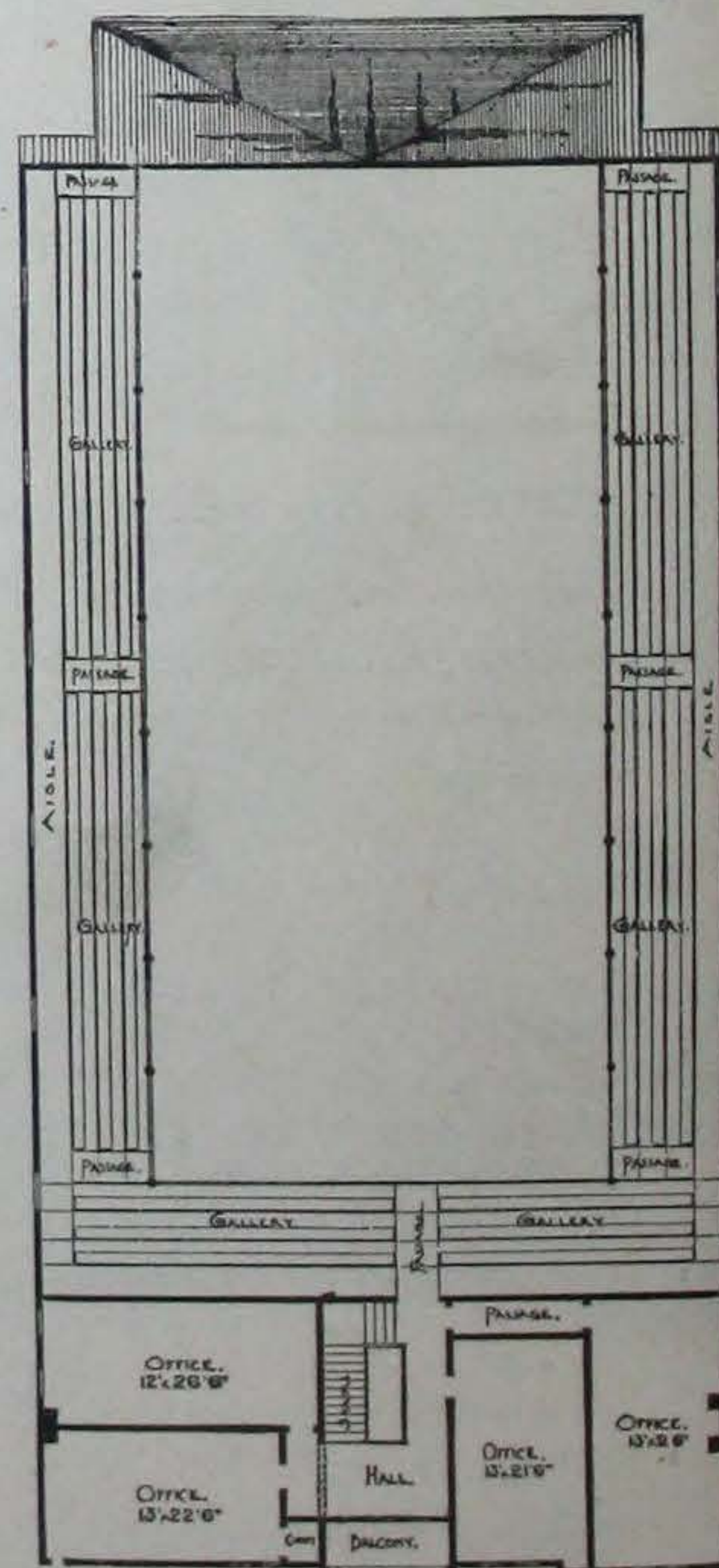
[See the first pages of this book for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

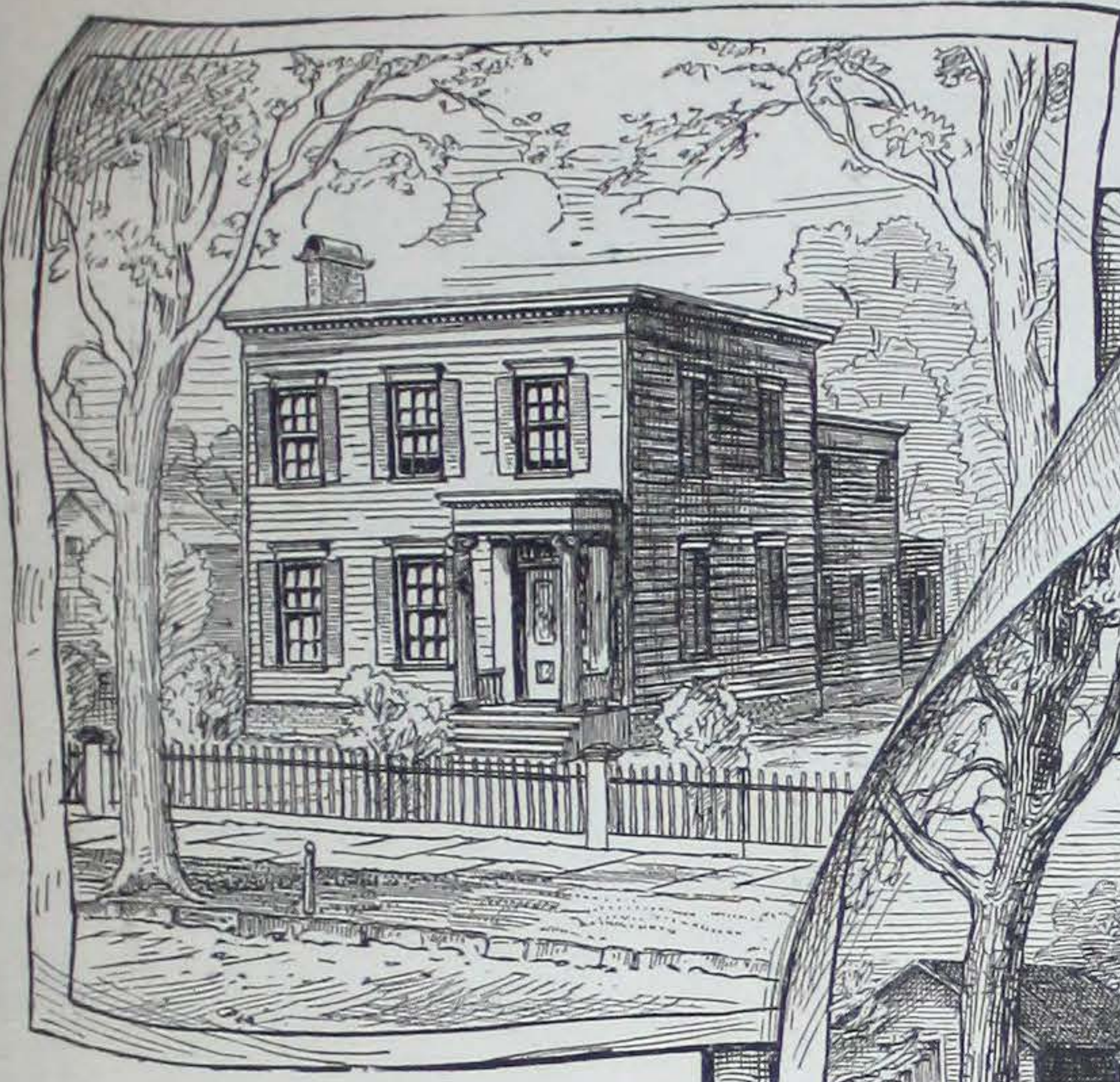
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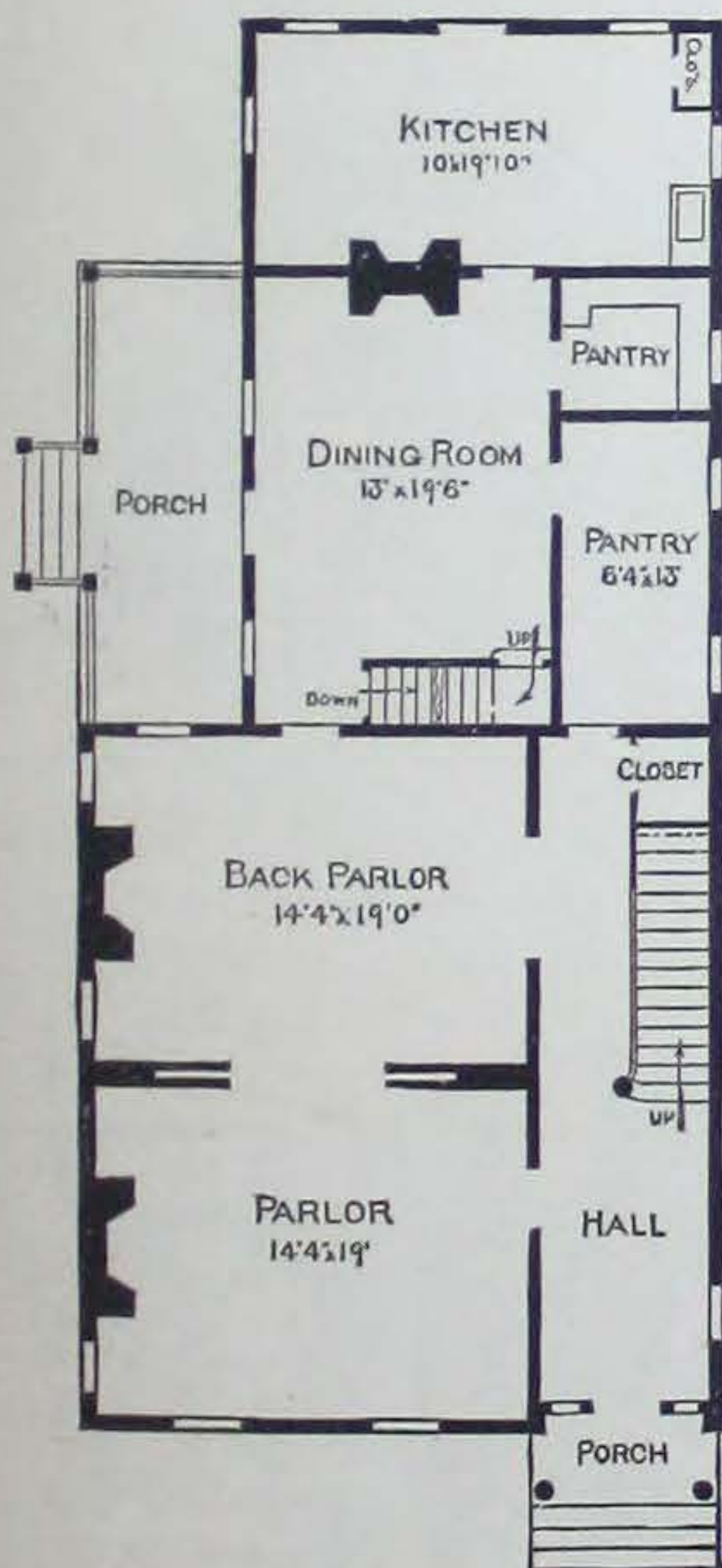
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.



SECOND FLOOR. NO. 244. RINK



THE OLD HOUSE



FIRST FLOOR OF THE OLD HOUSE

erected in that part of the hall formed by the new wing.

A new chimney was built between the library and the hall, serving for each.

In the library and in the front parlor, Jackson's ventilating grates are used, effectually heating the first and second stories, and at the same time giving the cheerful effect of the open fire.

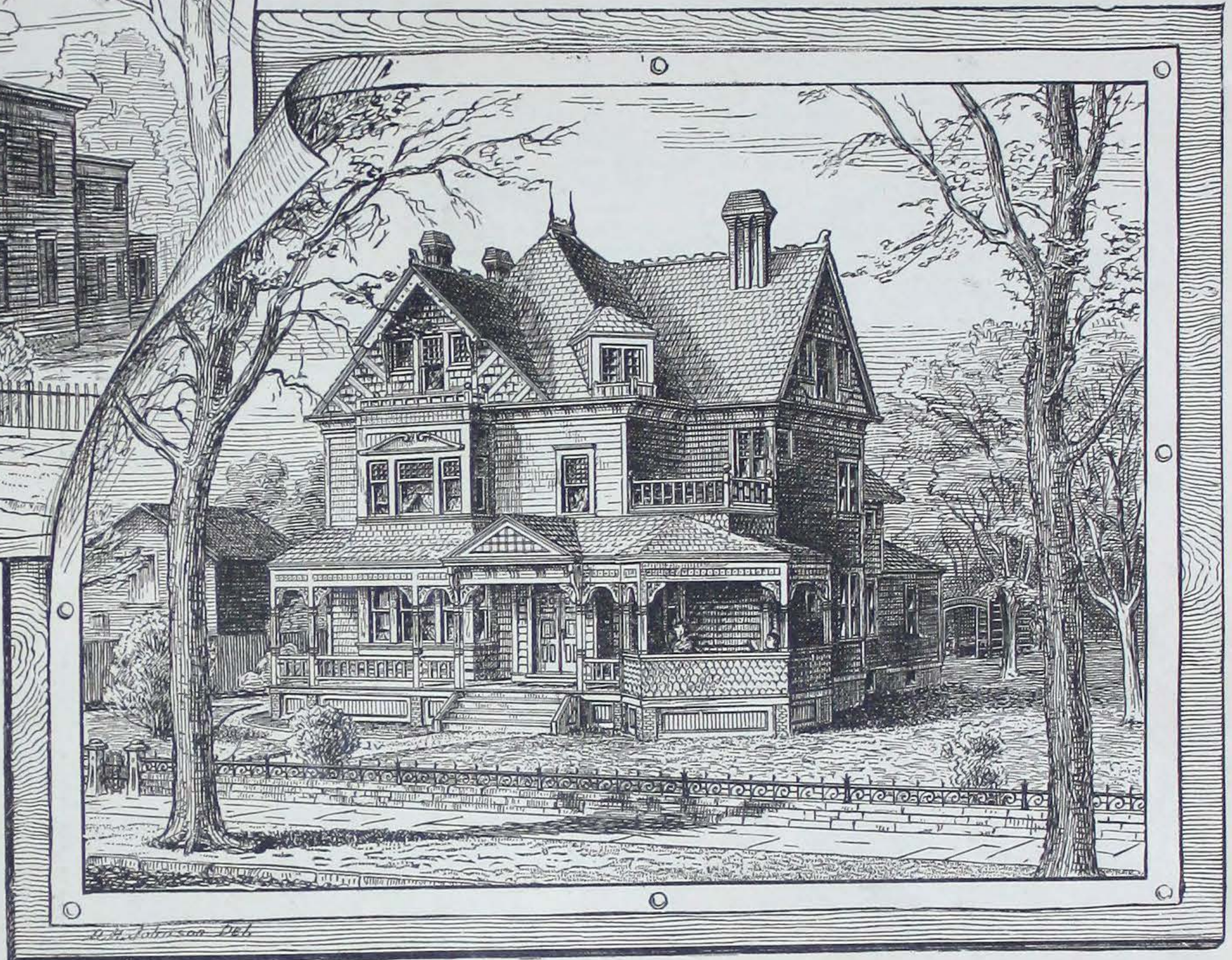
The large front veranda is new, and with its 12 ft. deep secluded bay, formed by the staircase hall, is a feature that is much liked; the side veranda was re-modelled to conform to the style of the other changes.

Large bay-windows were added to front and side.

The servants' staircase was removed from the dining-room and put out of sight, with entrance from the pantry.

The high slated roof that was added in place of the flat tin one gives a fine attic, with four good bed-rooms.

The second story contains five large bed-rooms and bath-room. The first story was re-trimmed throughout, in modern style, with hardwood.



THE NEW HOUSE

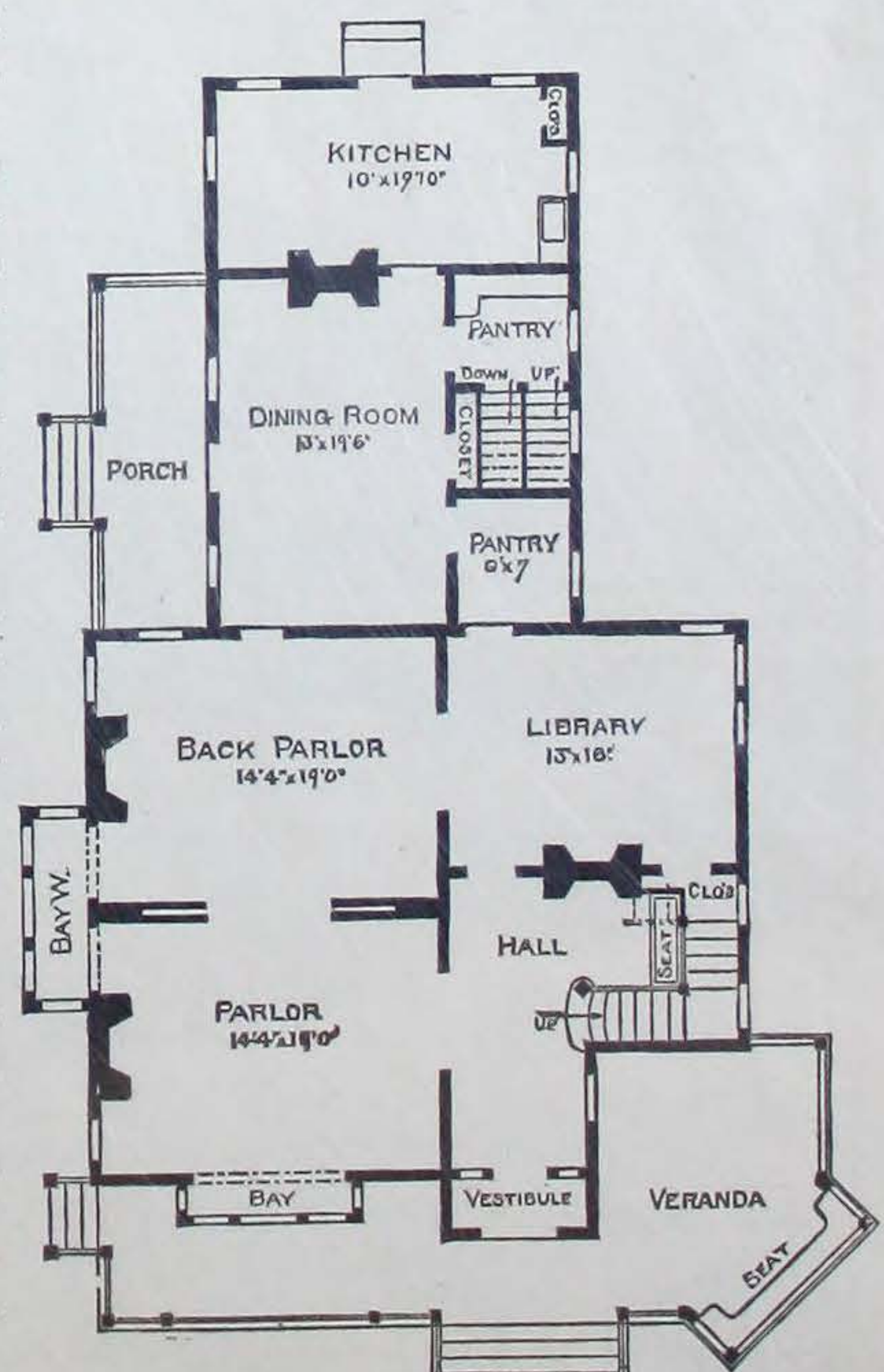
RE-MODELLING AN OLD HOUSE

THE alterations and additions to the old house were as follows: A large portion of the side wall was removed and a wing 8 ft., 8 in. x 24 ft. added to the right side; the rear part of the old hall, partitioned off with a part of the new wing, formed a library; the old-fashioned straight staircase was removed and a handsome new one, with landings,

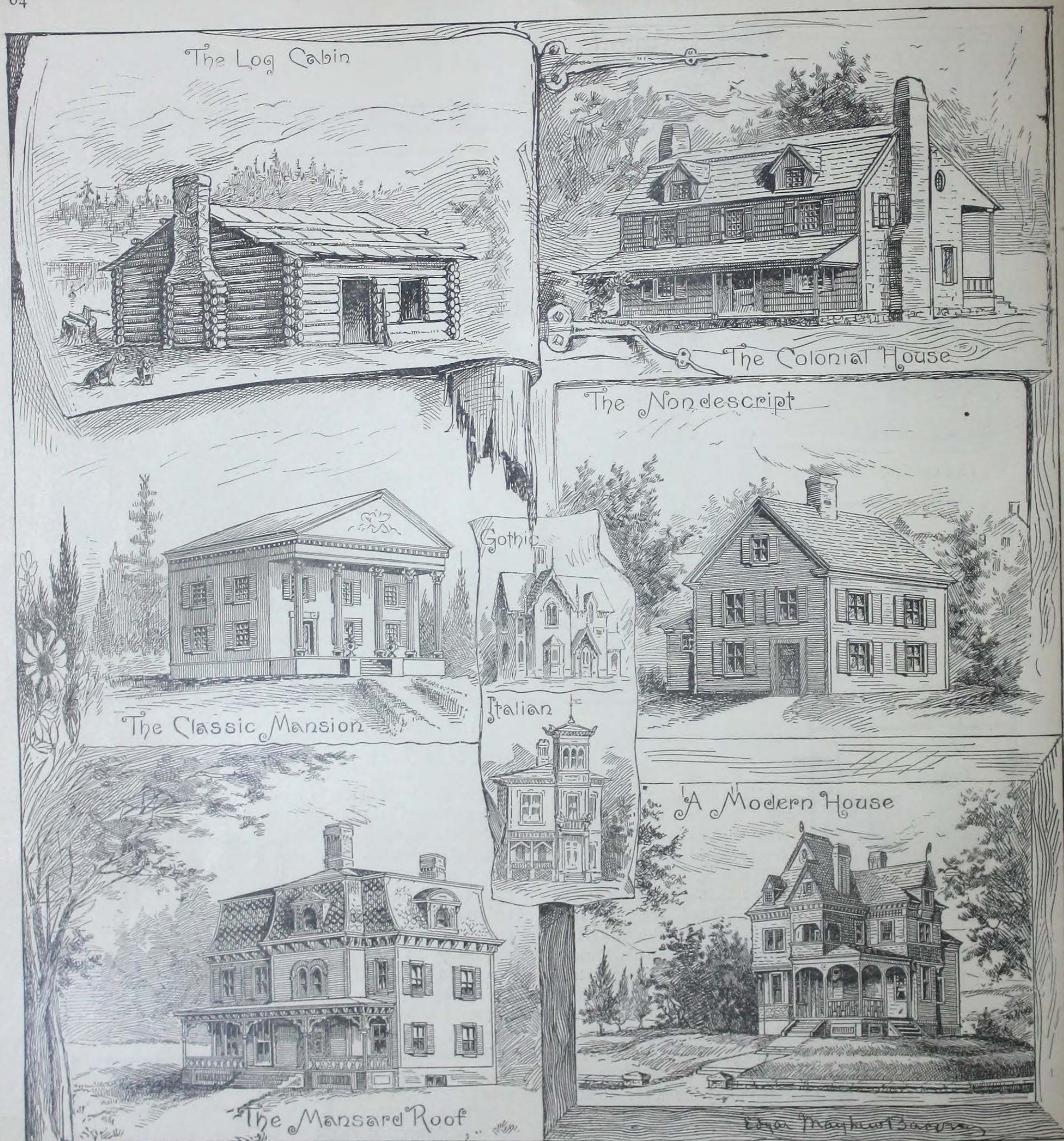
The side bay-window is a rather novel one, being entered from both parlor and back parlor, the openings screened by curtains. The transformation effected in both exterior and interior are great, and show how effectually an old house can be modernized by the employment of a little ingenuity and skill.

The builder of the original house (in the year 1845), "still doing business at the old stand," executed the alterations also, and made a good job of it.

A new house built after this plan would cost about \$6,500 to \$7,000. As a general rule it is better to build a new house than to make extensive alterations on an old one.



FIRST FLOOR OF THE NEW HOUSE



DOMESTIC ARCHITECTURE IN AMERICA

FIRST the Log Cabin; then the Colonial House, which was built before and for some time after the War of the Revolution; then the Classic Mansion early in the present century, which sprang from an ambitious attempt to copy the style of public buildings; later the Gothic and Italian obtained some recognition, and about the same time (1830 to 1840) arose the great Nondescript—the square box, modeled after a packing case, which every rough carpenter

could build,—and he has built it, unfortunately, from one end of the land to the other; next (about 1860) appeared the Mansard Roof, a modification of the box style, simple and easy to construct and therefore popular with the carpenters, who urged them upon thousands of owners; and last the Modern House, designed by the architect and not by the mechanic, having beauty and unity of design and intelligent provision for the comforts, elegancies and refinements of life.

THE HABITATIONS OF MAN IN ALL AGES

BY VIOLLET-LE-DUC

Translated by BENJ. BUCKNALL, Architect

TRANSLATOR'S NOTE

THE instructive and interesting book, a translation of which I now present to the English reader, describes the origin and development of Domestic Architecture among the several races of mankind, the modes in which human dwellings have been constructed, and the appearance and manners of their inhabitants from pre-historic down to modern times. The pencil of the artist has aided our imagination vividly to realize all the chief features in this progress; the rude shelter of primitive man, the shifting habitations of nomadic hordes, the massive grandeur of Egyptian and Assyrian dwellings, the quaint peculiarities of those of China, the elegant abodes of the cultivated Greek and wealthy Roman, the lordly castle of feudal times, and the sumptuous mansions of the Renaissance.

The interest of the subject is further enhanced by the doings and discussions of two imaginary witnesses of this development,—“Epergos” and “Doxius”—personifying respectively the spirit of Progress and that of obstinate adherence to traditional forms and habits.

This latest work of M. Viollet-le-Duc contains the results of his studies in wide and varied fields; and among the principles which his extensive and masterly survey brings into prominence, none, perhaps, is more striking than the fact that it is impossible for man to forget his past; and that just as the incidents of childhood make the most lasting impression upon the memory of the individual, and early habits affect his whole career, so does tradition—which is the memory of a people—perpetuate those habits and methods which necessity or predisposition induced in its infancy. Methods of construction adopted in times of primitive simplicity leave traces in the architecture of later periods, when that simplicity has been exchanged for luxury and refinement. On the other hand, we observe how, in the domestic architecture of the past, the main features of construction are determined by a consideration of habits, exigencies of climate and situation, the nature of the materials and the means of execution at the command of the builders; while we find them succeeding in giving even to the most primitive conceptions and modest structures that charm which arises from the free expression of a rational application of means to an end, and which, in human works, constitutes Art.

This interesting review naturally suggests an important practical question. How is it, that with all our accumulated science, wealth of means, and facilities for studying the artistic works of past ages, few of our buildings possess the charm of Art, while in so many it is conspicuously absent? May we not reply that the cause of our failure is the absence of rational method in design and execution; and that if we brought to bear upon our architectural works the same amount of knowledge, reflection, and common sense which is manifested in our purely engineering and naval constructions, we should possess an architecture of our own, worthy of our advanced civilization and in harmony with our national genius.

I wish to take this opportunity of expressing my deep obligation to Mr. John Sibree, M.A. Univ. Lond., the accomplished translator of Hegel's “Philosophy of History,” for the assistance rendered me here, as well as in my translations of other works of Viollet-le-Duc, by his able and scholarly revision of my manuscript for the press.

BENJ. BUCKNALL, Archt.

PROLOGUE

IN an age very remote from the present, seated upon a mountain brow, two beings are pensively contemplating the vast landscape which stretches before them.

Lakes of irregular shape, connected by stagnant shallows, enclose level expanses covered with scrubby vegetation, varied here and there by low rocks which show like long, upright faults. The horizon is broken by a mountain chain of fantastic outline.

The sun's disc, broad, lurid and rayless, sheds a faint glow on the innumerable liquid streaks through the vapors suspended above them. Beneath this veiled light, the tracts of dry land stand out dark and definite against the haze.

Confused sounds penetrate the warm moist air. They are the croakings of batrachians, the hissings of reptiles, the lowings and bleatings of ruminants, the hoarse roar of mammoths and the cries of large birds.

“All is as it should be,” says one of the beings.

“Nothing is complete,” returns the other; “look at those creatures below this mountain, which we see assembling, then dispersing, looking about and betaking themselves to shelter.”

“Well?”

“They are not animals like the others. . . . They are excited—restless—gaze in every direction and move erect on their feet.”

“They live, eat and reproduce their kind . . . They exemplify the universal law.”

“No, look! they are fighting among themselves; they hurl stones at one another; they move in bodies, armed with branches of trees.”

“All animals fight among themselves.”

“Look again! there is an enormous bear coming out of the thicket; these creatures cease fighting; they gather together; they form a circle round the terrible animal and overwhelm it with stones. The beast does not know where to make its attack; it growls, and with bristling hair turns about. Look! the circle narrows: several of the creatures carry long sticks, armed at their extremity with sharp stones. They strike at the furious bear in concert. . . . It turns upon them. . . . Two

of the assailants have fallen, torn by the bear's claws. Nevertheless the animal is overpowered. Behold it stretched on the ground, covered with ropes made of rushes."

"All animals engage in attack and defence."

"Look again! they crowd round the two wounded ones; they carry them to the shore of the lake, lay them down on leaves and wash their wounds. See how they bend over them; hear those cries."

"What of that! Every created being has its aptitudes, its instincts; some make themselves nests: others burrow in the ground or build dwellings. Some flock together; some live apart, distrustful of their kind: all have their prey, and seek to provide against the attacks of their enemies. Thus should it be."

"Let us go down amongst these creatures. Come!"



CHAPTER I

ARE THEY MEN?

A DOZEN creatures, heavy of limb, with skin of a livid yellow, the crown of their heads covered with scanty black hair falling over their eyes, and with hooked nails, are grouped together beneath a bushy tree whose lower branches have been pulled downwards and secured to the ground by clods of earth. The wind is blowing violently and driving the rain right through this shelter. Rush mats and skins of beasts afford a scanty protection to the limbs of these creatures, who with their nails tear portions of animals and quickly devour them (fig. 1).

Night comes on and the rain increases. The strongest collect dead branches and long grasses, and pluck ferns and reeds, and heap them up against the wind; then, with sticks and with their hands, they try to make the water that invades their retreat run off by throwing soil on the piled-up branches.

Despite the violence of the storm, locked together like a nest of snakes, they all sleep except one, who keeps watch, uttering prolonged and plain-



THE FIRST SHELTER.—FIG. 1.

tive cries through the night to keep away noxious animals. When he gets sleepy, he awakens one of his companions, who takes his place.

In the morning the wind has abated, but the rain continues to fall in a close drizzle. The foot of the tree is under water. Then each one sets about looking for branches, reeds, and mud to raise the ground. Some reptiles, driven from their retreats, take refuge on the clods around the shelter, and are killed with sticks to serve as food for the family.

Not far off, Epergos, seized with compassion at sight of this misery selects two young trees a few paces apart. Climbing one of these, he bends it down by the weight of his body, pulls towards him the top of the other with the help of a hooked stick, and thus joining the branches of the two trees, ties them together with rushes. The creatures that have gathered round him look on wondering. But Epergos does not mean them to remain idle, and makes them understand that they must go and find other young trees in the neighborhood. With their hands and with



THE FIRST HUT.—FIG. 2.

the help of sticks they uproot and drag them to Epergos, who then shows them how they should be inclined in a circle by resting their tops against the first two trees that had been fastened together. Then he shows them how to fill in the spaces with rushes, branches, and long grass interlaced; then how their roots should be covered with clay, and the whole structure successively (fig. 2); leaving an opening on the side opposite to the wind that brings the rain. On the floor he has dead branches and reeds spread, and mud trodden down with the feet.

By the end of the day the hut is finished, and each family among the Nairriti wishes to have one like it.

Epergos, covered with sweat and dirt, then rests by his companion Doxius. "Why," says the latter, "thus run counter to things as they are? Wouldst thou be for teaching the birds how to make their nests, the beavers to build themselves huts different from those they are accustomed to make? Why thus alter the Creator's work?"

"Who knows!" answers Epergos: "let us return here in a hundred thousand days, and we shall see whether these creatures have forgotten my instruction and live as they were living yesterday. If so, then I am wrong in meddling with their affairs, and I have not found what I have been seeking; but if they have profited by my suggestions,—if the huts we see then are better made than these, I have been successful, for in that case these creatures are not mere animals."

"Folly!" returns Doxius.



CHAPTER II

THE ARYAS

DOXIUS and his companion have halted in the midst of an elevated country. It is a vast plateau, commanded on the north by a chain of mountains whose summits, lost in the mists, are seldom visible.

Wide and deep valleys furrow the plateau, and torrents rush down the slopes and along their beds, which are covered with rocky fragments and forests.

Eternal snows clothe the heights. Accumulating, they spread out in long glaciers as far as the bottom of the valleys, hollowing out gleaming furrows, and pushing before them rocks and sand. If at times the rays of the sun warm the atmosphere, the vapors soon rise from every quarter, along the slopes, enveloping the mountain-tops, and gather in dense clouds; the air darkens, and terrible storms last for several days.

Overtaken by one of these storms, Epergos and Doxius have sought shelter under a rock. The close rain prevents them from distinguishing objects a few paces off, and the echoes return the claps of thunder which seem to burst from all points of the horizon; when a voice clear and ringing strikes the ear of the two companions; they have never heard anything on earth of which its intonations remind them. The voice comes nearer—they can distinguish the words:

"The milk of the cloud has swollen our waters, and we are ever moving onward to the reservoir which God has prepared for us. We cannot stay our course. . . . What does the sage desire who interrogates the rivers?"

"What is that?" says Epergos.

"It is the noise of the wind," answers Doxius.

"No; it is a spirit. He is close to the rock." . . .

In reality, a being like the two companions comes under the rock. . .

"Who art thou?" asks Epergos.

"Arya," replies the stranger.

"Thou art alone?"

"No; I am the father of a numerous family. I have a wife, children, and nephews, not far off, in my dwelling. Come with me; you will rest better than under this rock; but let us wait a little till the clouds pass away."

"And how are you occupied in this dwelling?"

"The mother brings up our children. I have flocks and herds which I tend, and with the milk I feed the family. With my weapons I defend them against wild beasts and enemies. In the morning, before the rising of the sun, and in the evening, after its setting, we sacrifice. The young men help me out of doors,—the maidens weave garments, gather in the *sôma*, milk the cows, and keep the dwelling clean."

"Are there other families besides thine?"

"Many."

The rain abates, and masses of whitish vapor, drifted by the wind, are spread in flakes through the forests. Sometimes dark spots are visible between them—the bottom of the valley or some point of rock; at other times they present only a gray mass shutting out every object from view.

"Let us go!" says the *Hom*, and the companions follow their guide.

Shortly after, two boys are seen coming through the mist. "Father!" they say, "the storm is terrible up yonder. We were in search of thee, and are glad to meet thee."

"Here are guests," the father answers. "Hasten to tell your mother to make ready what is needful."

Doxius, Epergos and the father reach the dwelling. It is placed against high rocks, which shelter it from the wind. The roof, very projecting, is supported by forked trunks of trees. The walls are formed of other trunks laid horizontally one upon the other, and framed together at the corners.

On either side of the dwelling, a little in advance, are two sheds; one is intended for the cattle during the winter, and the other contains forage (fig. 3). The walls of these sheds are made of coarse wicker mats.

These three structures surround a kind of area, in the middle of which is a large stone, smooth and clean.

Surrounded by her children, the mother receives the guests beneath the overhanging roof, and takes them into the hut, at the farther end of which, against the rock which serves to support the building, a bright

fire is burning, whose smoke finds vent through an opening contrived in the roof and a long, wooden flue.

Rush mats cover the beaten floor; other mats are hung along the walls and across the hut, dividing it into three nearly equal parts. Lamb-skins laid upon heaps of dried herbs form seats round the hearth, in front of which a large, black earthen pot is giving out steam of an agreeable odor.

Epergos observes all these things not without surprise. As for Doxius, he seats himself near the hearth and looks at the flame.

"Mother," says the *Hom*, "get ready the meal; these strangers must be hungry." Then turning towards his guests: "Perhaps you are tired; rest awhile before you eat. Here are lamb-skins provided for you."

"No," says Epergos, "we are in no want of rest.—May I ask if it is long since your family settled here?"

"Stranger, why this question? Have I asked thee whence thou comest, or where thou wast going? The Aryas have always inhabited this mountain. My father, and my father's father, lived in this house, which is ours as well as the pasturage round about. . . . But of what interest is that to thee?"

"Pardon me; but my companion and I know nothing of these things. We knew not that these elevated plateaus were inhabited by Aryas. Hitherto we had only seen on the earth beings inferior to thee, living like the brutes on raw flesh and wild herbs,—not knowing how to build places of shelter,—naked and filthy."

"Yes, the *Dasyus*," replied the master, "an accursed race. Indra will drive them from the earth, which they defile by their presence, and which belongs to the Aryas!"

At these words a faint smile escaped from Doxius. The fury of the



THE PRIMITIVE HOUSE OF THE ARYA.—FIG. 3.

storm was increasing. Black clouds were gathering on the neighboring peaks, and the reflection of a dull gray light gave place to the bright flame of the fire. The wind was lifting the mat hanging in front of the triangular doorway, and was driving the hailstones into the very middle of the hut. The younger children, holding their mother's long tunic, had become silent, whilst the father and his eldest son were securing the mats which closed the openings with rush cords.

The thunder did not cease rolling, but with a muffled sound.

At times there came a lull; then a kind of distant wail was heard, but

which came ever nearer, and seemed to issue from every point at the same time; then the crackling of trees close by, and the cabin shook, and the rain beat violently on the pine bark which covered the roof.

Soon the water, driven against the rock that supported the house, found its way in through several openings, and ran over the floor; a cracking noise was heard; it was the top of the large smoke-shaft, which was giving way, borne down by the water. A torrent of mud then fell upon the fire. The hut was no longer tenable; smoke, hail, and blackened water were pouring into it on every side. All had to take shelter in the cattle shed, then empty, the animals being out at pasture.

The *Hom* and his companion first bethought them of their guests. They housed themselves as well as they could in the shed, and for supper had to be content with milk, cheese, and pine seeds. Toward break of day the storm ceased, and the stars shone out in the sky.

Just as they were beginning to pale, the father and his family went out of the shed and advanced towards the stone placed in the centre of the area. The mother was holding two wooden vessels: one containing a liquid extract from the *sôma*, the other some butter.

The father, having taken from beneath his garment a bundle of dry grass and sticks, laid it on the stone; and rapidly turning a stick in a piece of bark, the latter soon blackened and took fire. The dry grass being lighted, the mother poured over it a small quantity of the liquor of the *sôma*; immediately the flame burned with a bright light, and the father pronounced with a sonorous voice these words:

"I invoke for you the bright Agni, host of the people, . . . that he may pour down floods of light, and from his central fire load his servant with good gifts.

"We love to honor this god, the source of all your prosperity; we love to see him increase and send forth his beams. His flames undulate on the branches."

Then the mother having thrown butter on the altar, the fire blazed with fresh brilliance.

"Seizing on the wood which he consumes, he shines in splendor; he rushes along like a torrent, resounding in his course like a chariot; a trail of blackness marks his path. He charms like the sun smiling between the clouds. Give us, O Agni, brave comrades, happy abundance, noble offspring and great wealth!"

The sun was then beginning to light up with touches of gold the snowy peaks defined against the deep blue of the sky. The air was keen and piercing. The family were standing in silence before the fire, gazing intently eastwards. Nothing broke the stillness save the noise of the neighboring torrent.

The two companions stood a little way off. Then said Epergos aside to Doxius:

"What thinkest thou of all this?"

"I think that these Aryas, as they call themselves, will destroy the Creator's work. They were not wanted on the earth."

Epergos made no answer



CHAPTER III

THE NEW DWELLING OF THE "HOM"

"TAKE care of our guests," said the father to his companion. "I am going to seek my brothers to help us to rebuild our dwelling; and taking his eldest son with him, he plunged into the neighboring forest.

Assisted by her second son, the wife, after having served her guests

with milk, began to look among the ruins of the fallen house for things which might still be used.

Epergos, raising the fallen timbers, was helping her, while Doxius seemed lost in meditation.

"Doxius!" cried Epergos; "come thou, too, and help us!"

"Why," answered Doxius, "since this hut has fallen, seek to rebuild it?"

"Why!" warmly replied his companion. "When the storm has destroyed its nest, does not the bird form it anew? If a stone falls into an ant's nest, do not the ants make another by the side of it?"

"True," answered Doxius; and he went to aid in the clearing.

Towards the middle of the day the father returned with his two brothers, and by sunset the site of the hut was cleared. The brothers had brought some provisions. The weather was fine, and a large fire having been lighted in the court, the inhabitants and the two companions seated themselves around it on clods of turf, and having eaten their meal, thus conversed:

"Host," said Epergos, "if you build your dwelling against this rock, are you not afraid that the first storm will overthrow it again?"

"Yes," replied the Arya; "but my father lived there, and I wish to live there."

"Be it so; but then should you not turn aside the rain-water which collects up there and pours down upon the roof? In the morning we will ascend the rock, and see if we can lead the rain-water to the right or left of your dwelling."

"That might perhaps be done," returned the father; "I had already thought of that."

"And then," continued Epergos, "why not build the walls of your dwelling with fragments of stone and earth? It would thus be more substantial, and protect you better from cold and heat."

"We will try," replied the Arya.

"Hom!" then said Doxius, "just now you spoke wisely; you said that you wished to have your father's house restored; rebuild it then just as it was—just as your father left it to you."

"But," returned Epergos, "who has told thee that the house destroyed yesterday was in every respect like that which was probably erected in the same place before it?"

"It was not like it," said the Arya; "for my father told me that his father's dwelling was smaller, and was covered with dry grass."

"Then," said Epergos, "we can make the new one more spacious and strong than the last was."

"Where wilt thou limit thy desires?" murmured Doxius.

"Why should I limit them? Let us set to work, that will be better than talking."

"Woman," continued Epergos, addressing his hostess, "tell us, you who have always lived in the house, and have taken care of the things it contained, whether the ruined dwelling suited you in all respects; whether you found it wide enough, and sufficiently weather-proof?"

"It is true," answered the woman, "the children were cramped for space; in high winds the smoke often annoyed us, and we were scarcely sheltered from the north wind or the heat. Still, such as it was, we lived happily and peacefully in it." And she began to weep.

"No useless tears!" said the Arya. "Let us set to work before the sun disappears behind the mountain. Come with us, mother, and tell this stranger what thou wantest in addition to that which we had before, since he shows a desire to help us."

The wife then pointed out, on the site of the cleared ruins, the space she proposed to allot to the children, the common apartment, and the room intended for herself and her husband. And it was not without shedding fresh tears that she thus designated each part of the house.

"Thou seest," said Doxius, "this woman thinks only of her ruined dwelling; and all that thy knowledge enables thee to build will never make her forget that old habitation where she brought up her family. Be satisfied, therefore, with the building such as it was; our hosts will be happy and will bless thee."

"Leave me to act," replied Epergos. "Present good makes us forget that which is past; the fruit makes us forget the flower."

"And winter blights both," muttered Doxius between his teeth.

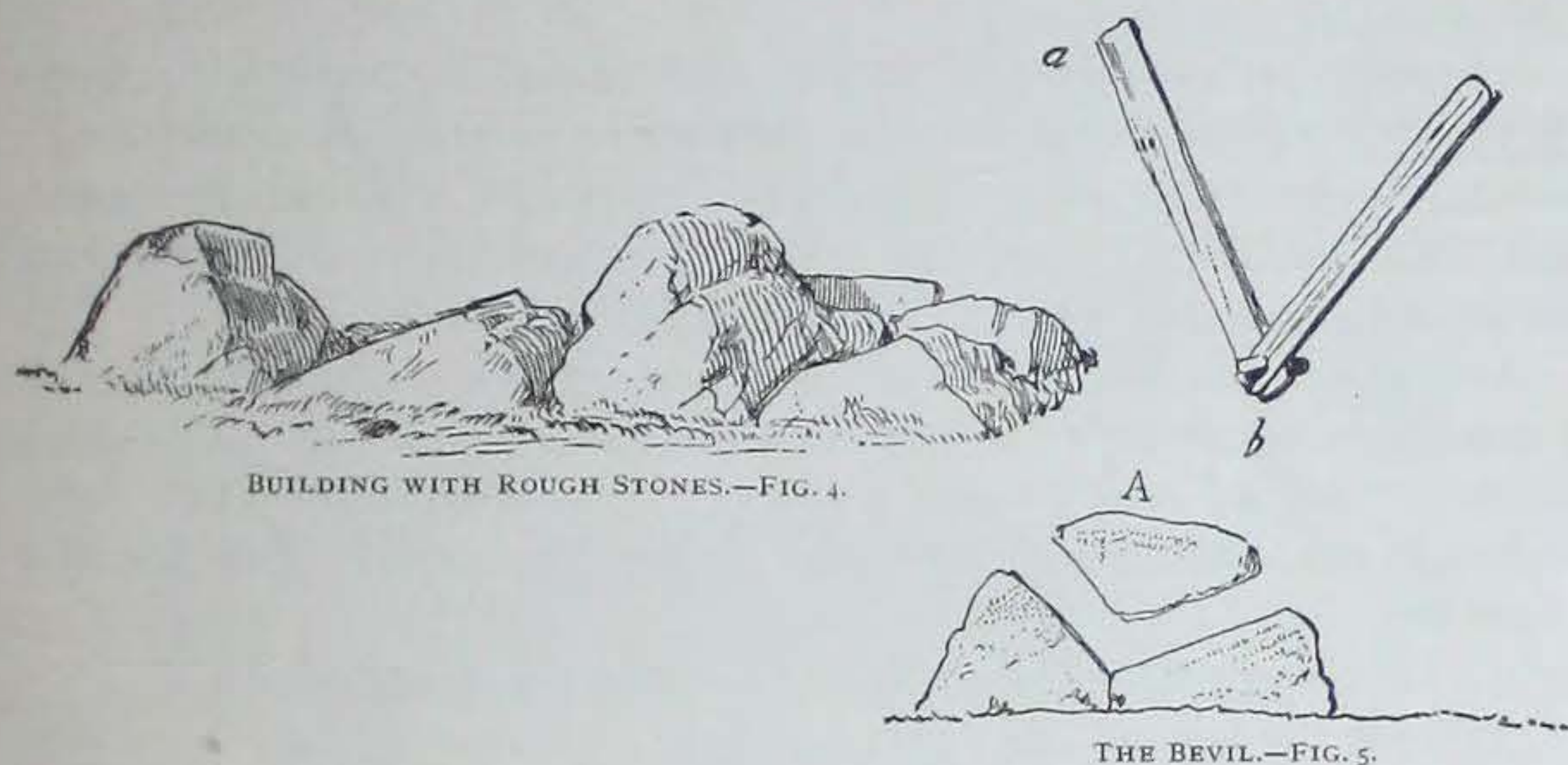
In the way of tools the Arya had only hatchets of flint provided with handles, and a kind of saw of the same material.

While the host, his brothers, Epergos, and the eldest of the children, went into the neighboring forest to cut the timber required, Doxius

remained with the mother. He led her thoughts back to the ruined dwelling, and took pleasure in getting her to describe minutely the various parts of the hut, the primitive furniture it contained and the family events it had witnessed. Doxius seemed moved by each touching souvenir communicated by his hostess, and constantly repeated: "Have this dwelling, therefore, rebuilt in such a way that you may find everything in the place it formerly occupied, and may not have occasion to regret anything of the past."

When in the evening the *Homs* returned, covered with sweat and dragging after them the timber collected in the forest, they observed the woman silent and sad.

The meal was not prepared, and they were exceedingly hungry.



"Mother!" said the Arya, "what is the matter, and why this sad countenance? What has happened to hinder thee from preparing our food?"

The woman, her eyes red with weeping, made no reply, but hastened to make up for the time lost.

"The mother," said Epergos, "regrets her ruined habitation; her melancholy has caused her to forget our wants and her own. It is only natural. When she finds herself mistress of a larger and more comfortable dwelling her sadness will vanish. Let her indulge her regrets, and to-morrow we will set to work."

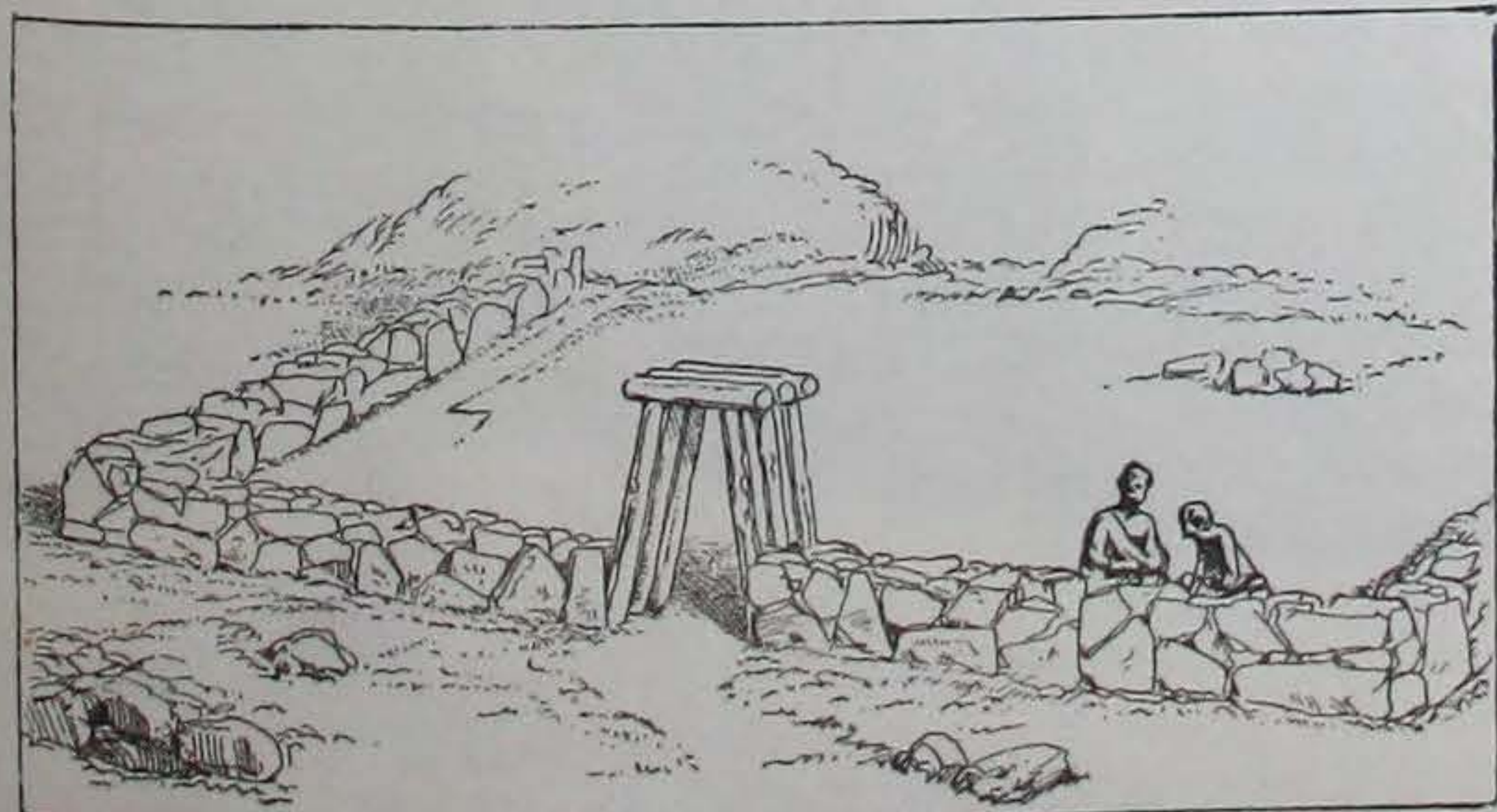
At daybreak, in fact, they began to mark out the new house, and to get everything in readiness to erect it speedily. By the advice of Epergos they determined to build the house upon a platform formed with an edging of large stones, so as to preserve the floor inside from the damp kept up by the rain around the old dwelling. Next, the perimeter of the house was commenced with stones fitted carefully together. A first course was placed on the ground (fig. 4), the broadest face downward; then, by means of two pieces of wood joined with a peg (fig. 5), they took the angle $a b c$ made by the two stones already in place, and looked for a stone which should present nearly that angle; having found one, they put this stone A in that angle, and similarly for all the first course; so that, by the end of the day, the basement of the future dwelling was formed, an open space being left for the door (fig. 6).

With smaller fragments the basement was made even. The walls were terminated by the rock.

"If instead of these piled-up trunks of trees, which formed the walls of your dwelling," said Epergos, next morning, when they had resumed the work, "we were to raise the walls with stone up to the height of the roof, should we not thus have a more substantial and durable shelter?"

"Certainly," replied the father; "but how could we lift these stones? We have already had great difficulty in laying the last."

"Observe," returned Epergos, "what we can do; we will not lift stones from below, but go and find some up there, on the rock, and let



BASEMENT FORMED WITH ROUGH STONES.—FIG. 6.

them down on trunks of trees inclined so as to form a road. In proportion as the wall rises we will give less slope to the trunks, by resting them on the wall."

"Let us try," said the Arya. Accordingly, with the help of bonds made of supple branches, the stones were let down from the rock on trees laid side by side slantwise, their lower ends resting on the side walls, already showing above the ground. Thus the walls were raised without very great difficulty, openings being left for the door and windows. This work, however, necessarily took up a great deal of time, for the workmen were not very skillful; the rain, too, came on again, and continued falling for four-and-twenty hours. One evening, while the family and their guests were taking their meal, crouching round a fire sheltered by a few mats, discouragement was marked on their faces; the children clustering round their mother were shivering, and but few words were exchanged; Epergos alone preserved his usual cheerfulness. "I see," said he at last, "that the task we have undertaken appears to you heavy and very tedious. We should have finished sooner if we had made walls of trunks of trees, piled one upon the other, as in the house that has fallen."

"That," said Doxius immediately, "is what wisdom enjoined; and this woman and her children would now have been under shelter in their dwelling if thy imprudence had not induced thee to undertake a labor beyond thy strength."

"We should have finished sooner if thou hadst lent us thine aid," interrupted Epergos. "Since the *Hom* has a conception of the best, he ought to follow the tendency which leads him towards that best; and is it to contravene the intentions of the Creator to say to him: 'Thou shalt stop here.'"

The Arya had listened attentively; and putting his hand on Epergos's shoulder, he said to him: "Guest, it shall be done as thou hast said."

Next day the family set to work with fresh ardor, and in a few days the house was finished (fig. 7).



REBUILT HOUSE OF THE ARYA.—FIG. 7.

By the advice of Epergos the openings had been formed by means of leaning wooden jambs with cross-pieces above (fig. 8). The stones rested against the jambs and upon the lintels, so that they were kept securely in place. The joints, more or less open between the stones, had been filled with moss mixed with clay. The openings were covered with mats. In front of the habitation, upon the plateau which raised the structure above the natural soil, was a portico formed with forked trunks of trees set upright, which received a cross-piece on which rested the timbers supporting the roofing of pine-bark. This time the fireplace was made with large flat stones fixed upright. On these stood the framing to which were fastened the pieces of bark forming the smoke flue. The pieces of bark were kept in place by osier bands, and the whole was plastered with clay which they found in the neighborhood.

On the top of the rock the workmen had made a dyke by means of trunks of trees laid down, intermingled with pebbles made firm with earth,

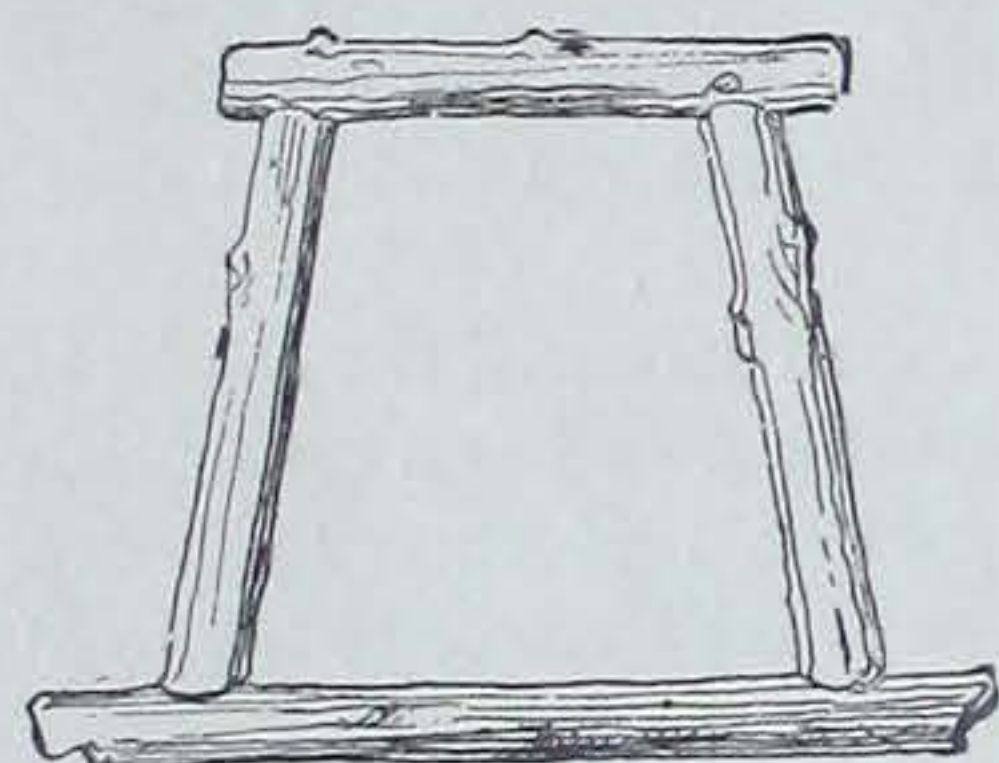
Thus the rain-water flowed off right and left, and could no longer penetrate the roof. They settled in this new dwelling, more roomy, strong and weather-proof than its predecessor. They were working at the mats which were to form the partitions. The father was engaged in making the earthen vessels which were to replace those broken. For this he used clay procured in the neighborhood, and which he fashioned with his hands on a thin slab resting on a stone pivot. He made this plate revolve so as to give the vessels a circular form. Epergos was watching him at work and attentively considering some fragments of pottery broken by the fall of the house.

"How do you give these vessels the hardness necessary to enable them to hold water?"

"By drying them in the sun and surrounding them with fire when they are quite dry."

"If so," said Epergos, "you might make walls with this earth, and make them very hard by surrounding them with a hot fire."

"Those masses of earth could not be sufficiently dried; being thick, they would retain some moisture, and would burst with the heat; for if



CONSTRUCTION OF A WINDOW-OPENING.—FIG. 8.

our vessels are too thick, and not thoroughly dried before they are baked, they burst."

"Oh, then you might bake pieces of earth small enough to dry well, and by their union form walls easier to build than ours were, made of large and heavy stones."

The Arya, listening to his guest, had suspended his work; he reflected a few moments, then taking some soft earth he beat it on a stone to make it thinner, cut it square with a piece of sharp wood, and said:

"Thine is a good suggestion, Epergos; we will try to bake this with the vessels."

Shortly afterwards, aided by the sun's heat, the pottery was well dried; the Arya built around a circular wall of pebbles, then he filled up the whole space with small wood which he lighted, taking care to keep up the fire. In half a day the vessels appeared to be sufficiently baked; they were allowed to cool slowly until the next morning. Some of them were broken or mis-shapen; but the earthen slab was hard, sonorous and of a beautiful brown color.

"Well," said Epergos to his host, "thou hast no need of any other material to make the walls thou desirest to build. Thy children can shape pieces of earth, and when thou hast a certain quantity thou wilt have them baked together, and thus form a floor in thy house quite dry and clean; and if some of the slabs are large and thin enough thou canst lay them on the timbers which form the roof, and shelter thy family from the rain."

CHAPTER IV

THE YELLOW RACE

A PLAIN, covered with luxuriant vegetation, stretches as far as the eye can reach; it is traversed by a wide river with a slow and muddy current, which separates into a number of branches, leaving between them long low islands. On the horizon there rises an immense cone crowned with snow, from the summit of which escapes a cloud of white vapors. On the banks of the river may be seen scattered habitations, which are built partly in the water, partly on *terra firma*. The men who live in these dwellings have not the lofty stature, the long fair hair, the white skin and blue eyes of the Aryas, but are of medium height; their skin is yellow and shining; their eyes, black and small, are contracted and turned up at their outer extremities; their hair is of the color of the raven's wing, and

beneath their sharp nose opens a wide mouth which exhibits short sharp teeth.

Epergos and Doxius would scarcely have felt disposed to make a long sojourn among this people, had not the aspect of their habitations strongly excited their curiosity. All these houses present a gay appearance in the sun; for they are covered with brilliant colors, and contrast with the rudeness of the dwellings of the Aryas. The companions, therefore, direct their steps towards one of the houses which appears to them more spacious and better ornamented than the others, and is surrounded by a garden. But when they wish to enter the enclosure they are received with a shower of stones.

"What thinkest thou of the manners of these hideous creatures?" said Epergos to his companion.

"I think that when you fall in with wild beasts, the best thing is to go away before they bite you; we have nothing to do here, let us go back."

"Nay, not so fast; we must know how creatures so savage in appearance make themselves dwellings which indicate refined manners. Our aim must be to discover the means of getting in."

At that moment there appeared at the door of the habitation a native of unwieldy corpulence. He appeared scarcely able to keep on his legs, and leaned on two young boys for support. A third was opening a large parasol to shade his large head, sunk between his shoulders, from the heat of the sun.

"What do you want?" said he to the two companions.

"To see thy house," answered Epergos. "It has appeared to us the most beautiful of all."

"Who are you? What do you bring?" returned the corpulent proprietor of the house.

"We bring health and long life, and cure infirmities," Epergos quickly replied.

"If thou speakest truth, come in, then for I have need of you," said the fat man, softening his voice; "but what proof have I that you are not seeking to deceive me?"

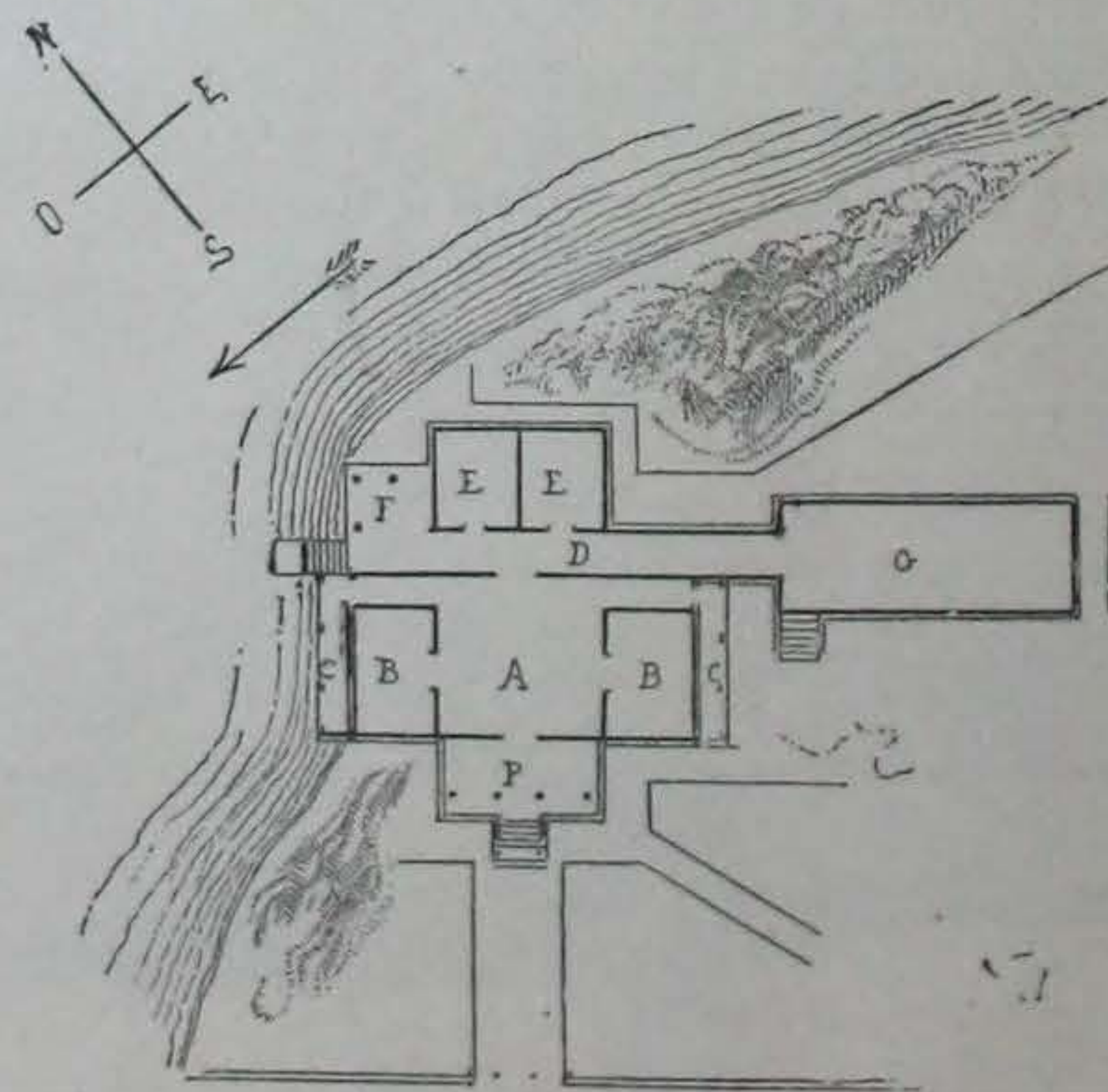
"We are very much older than thou, and yet thou seest that we appear young and active; we will tell thee our secret."

"Then you are welcome."

"What new folly is this?" whispered Doxius to his companion. "Art thou then a God, to promise health and long life?"

"Do not interfere with me; this deformed creature will be satisfied with us, and I shall have seen what I am desirous of seeing."

The house of the fat Fau (the name given to him by his servants), surrounded by shrubs and fruit trees, consisted of a portico raised a few steps above the ground (fig. 9). This porch P, very low and deep, gave entrance into a central room A, lofty, and lighted near the wooden roof which covered it, by openings furnished with a trellis-work of canes. On this room opened two side rooms B, very much less in height, and a narrow passage which led right and left to two covered balconies projecting on brackets C. One of these overlooked the river. Behind this gallery another wider one D, led on to a terrace F, to two small chambers E E, and to a long, low building G, allotted to the servants and the offices, such as the kitchen and provision stores. On the terrace F were posts,



PLAN OF THE PRIMITIVE CHINESE HOUSE.—FIG. 9.

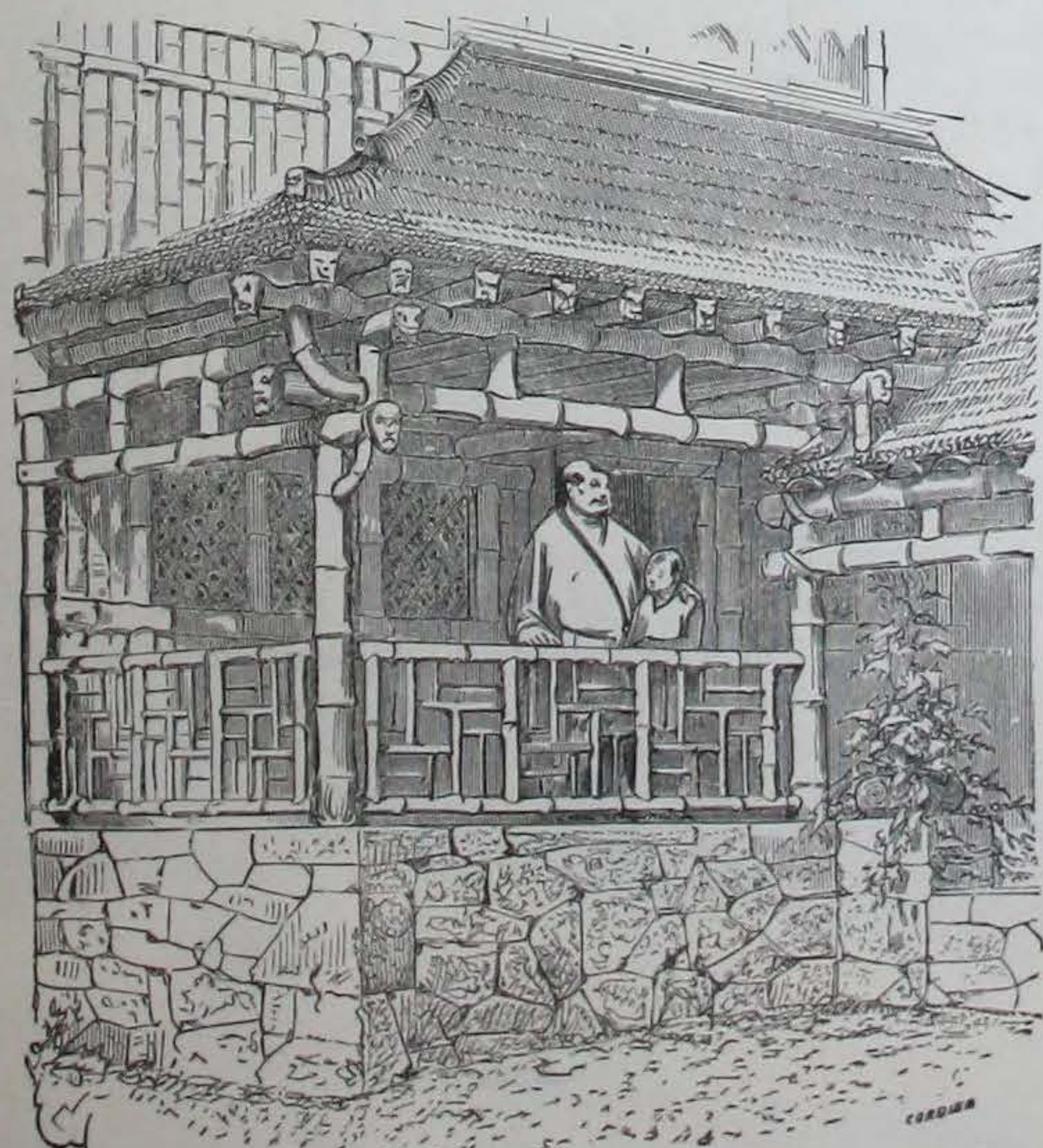


VIEW OF THE HOUSE.—FIG. 10.

from which mats might be hung, enabling the occupants to enjoy the fresh air of the river under cover. A small landing-stage descended from this terrace to the river to facilitate excursions on the water.

This building was constructed entirely of bamboos. Trellis-work of cane, tastefully composed, closed all the openings and allowed the air to circulate, while it subdued the glare of the sunlight. We give (fig. 10) the view of this habitation on the entrance side, and (fig. 11) the aspect of the porch.

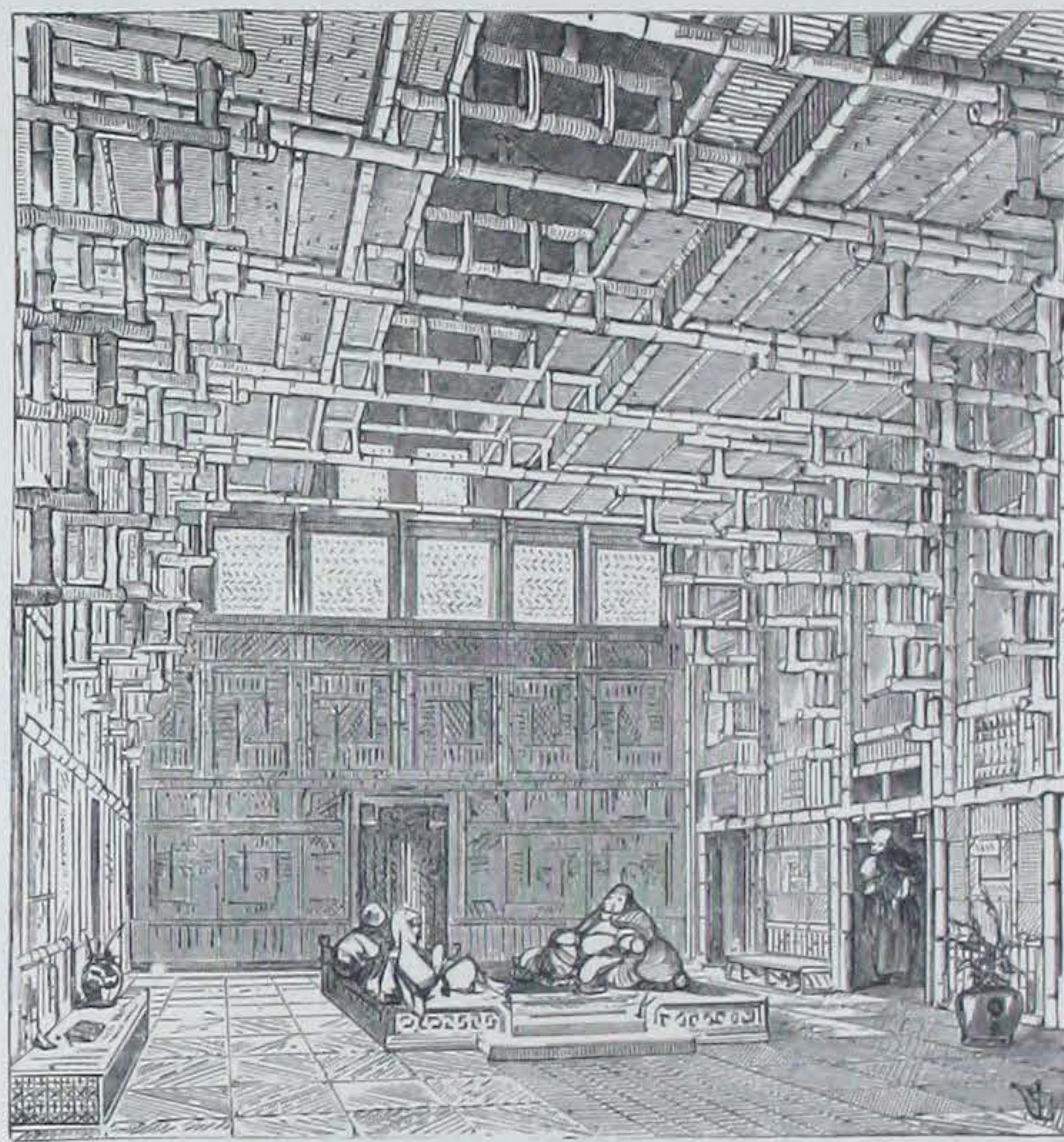
Great roofs, made of thick bamboos, bent and covered with reeds very ingeniously disposed, sheltered the interior from the rain and heat; for these coverings were thick. Close mats, made likewise of reeds, enabled the openings to be hermetically closed during the night, and covered the floor. The building rested on a base consisting of large stones, perfectly fitting, though irregular. The whole was painted outside and inside with lively colors, among which yellow and green predominated. On being introduced into the principal room, whose aspect was cheerful, and whose agreeable temperature contrasted with the oppressive heat of the outer air. Epergos examined with curiosity the arrangement of the bamboos which formed the lofty ceiling, lighted by openings pierced above the entrance and on the side opposite (fig. 12). His examination would have



PORCH OF THE HOUSE.—FIG. 11.

been continued had not the fat Fau invited his guests to seat themselves on thick mats which covered a sort of platform raised in the middle of the apartment. He let down his own ponderous weight upon a heap of bags filled with aromatic herbs. Having taken breath—for the effort he had made to go as far as the door had impeded his respiration—he ordered his servants to bring some strong drinks; then addressing his visitors, said: "What brings you into the Celestial Country?"

"The wish to be of service to the noblest order of human beings," answered Epergos. "We have visited many countries, and it is here alone that we have seen beings who knew how to erect buildings which do not remind one of the dens of wild beasts or the most ordinary birds' nests. While we observe that in the depths of the sea the humble molluscs build themselves substantial dwellings adorned with bright colors, we have not been able to understand how the most intelligent



INTERIOR OF THE CHINESE HOUSE.—FIG. 12.

among animated beings should not have been able to make themselves shelters, or have possessed only mean abodes. We have been informed, however, that in these vast and fertile plains, watered by great rivers, lived people that were superior to the rest of mankind by their industry and their intelligence; but that these privileged beings, the kings of the earth, are subject to infirmities and evils of every kind. Skillful in the art of curing these evils, and able to give relief to those who are afflicted by these infirmities, we have come hither. Make use of us, then, and put our knowledge to the test."

"You see," returned Fau, "I can scarcely walk a few steps without gasping for breath."

"Hast thou always been thus afflicted?"

"No; I used to be vigorous and active; I feared neither wind nor rain nor sun; I slept soundly the whole night through; and food, however coarse, seemed savory to me. Now, I cannot sleep; or, if I doze I soon wake up, imagining that a heavy stone is weighing upon my chest. The most appetizing viands seem to me tasteless."

"And when thou wast in good health, didst thou inhabit this charming abode?"

"Oh! certainly not; I had neither house nor garden. I worked hard all day to obtain a dish of rice, which appeared to me a very small portion. Nevertheless, this persistent labor enabled me to acquire some little property. For a long time I traded on the river, living in a boat, buying and selling to such advantage that one day I found myself rich enough to purchase this domain. Since that time I have employed others to work for me, and have rested myself, hoping to enjoy the wealth so laboriously amassed. But health has gone from me, and the rest I anticipated in this house, built under my own inspection, is only a protracted torture."

"Certain drinks and herbs, whose virtues are known to us, will relieve thee; but first show us this house, for it is worth while to know whether it is not the cause of your affliction."

The small eyes of the fat Fau then rested upon Epergos and Doxius with so marked an expression of distrust that the first resumed :

"If you mistrust us, say so openly, and we will leave thee to thy misery."

"Stay," replied the Fau immediately ; "you shall see the house at your leisure, when you have eaten and drunk." Then the attendant brought a vessel filled with a warm beverage, and some spiced cakes.

"This," said Epergos, after tasting one of the cakes, "is scarcely fit even for people in health, but would soon bring thee to death. Instead therefore, of this aromatic beverage, send for pure water. In order that the remedy that we shall give thee to-night may be effectual it is necessary for thee to abstain all day from anything but clear water."

Fau was scarcely capable of showing his domain to his visitors. The steward of his household was commissioned to conduct them everywhere. Epergos was able, at last, to examine at his leisure every corner of this abode, except the room where the wife and daughter of his host were shut up. It was one of those which opened on the large room. At every step Epergos uttered an exclamation. The bamboo framing supporting

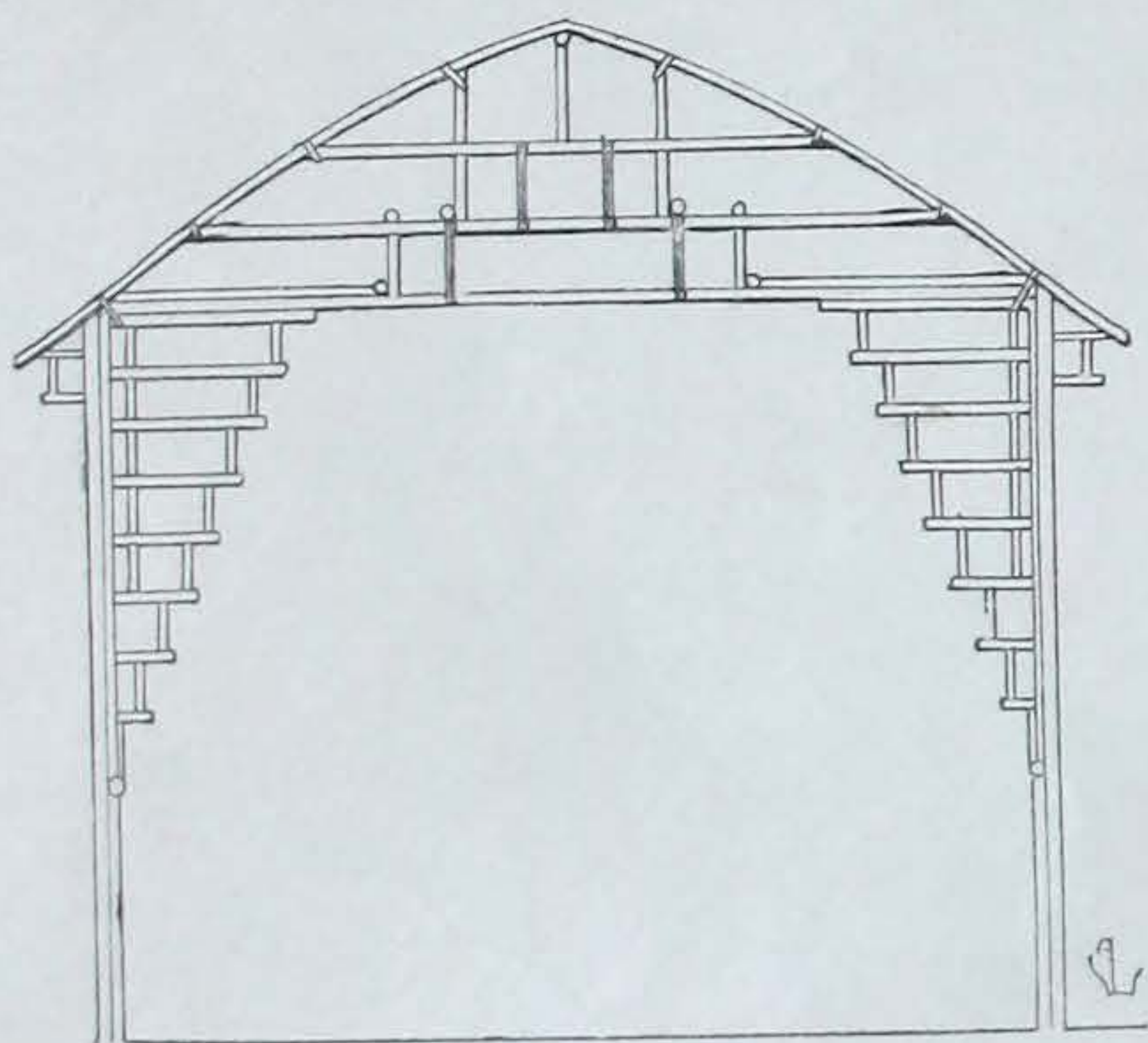


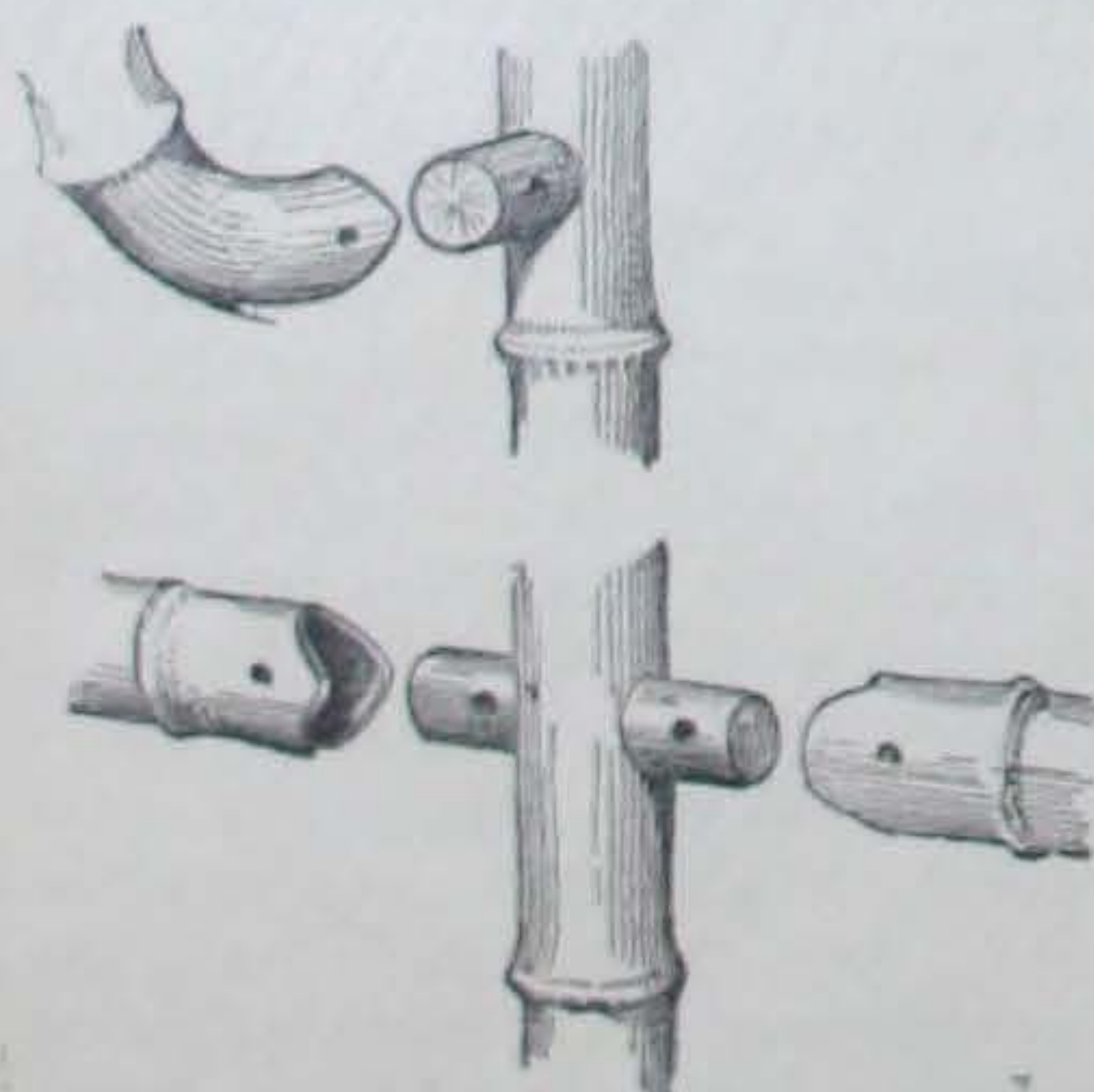
DIAGRAM OF THE CHINESE STRUCTURE.—FIG. 13.

the roofing of the principal apartment was the chief subject of his remarks (fig. 13).

"See," said he to his companion, "how with materials apparently so weak these men have succeeded in making a large roof as light as it is strong! How cleverly these brackets are managed! How freely does the air circulate in these rooms to prevent the discomfort caused by the heat of the climate!"

But Doxius scarcely raised his eyes, and appeared to take but little interest in all that Epergos showed him. The framework of the structure consisted entirely of bamboos of various thicknesses, intersecting and bracing at the same time in the simplest and strongest manner.

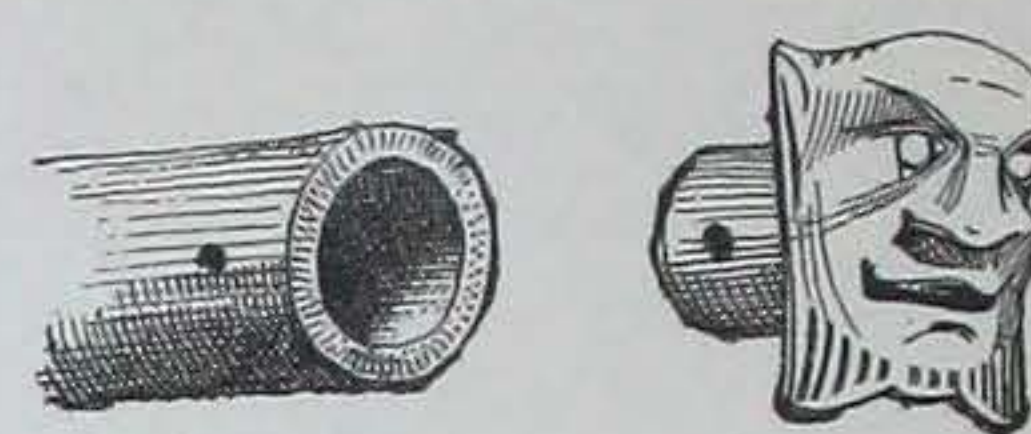
Seeing how all the parts of this house held together, Epergos asked himself how it was that all human beings had not discovered combinations so naturally suggested, and requiring so little intellectual effort. He studied with particular attention some of the bamboo framings presented in figure 14. To connect these canes at right angles the builder had put



BAMBOO FRAMING.—FIG. 14.

crosswise, through one of them, a cylindrical piece of wood, which fitted, as a tenon would do, into the cylindrical cavities of the bamboos to be framed together; these pieces were secured by pegs. He saw that the light canes which composed the balustrades of the portico were joined according to the same method, and he perceived that the rudely carved heads which finished the ends of the horizontal pieces of the porch outside were merely a kind of cork fitted into the cylindrical cavities of those pieces (fig. 15).

Reflection, however, suggested to Epergos that for the origination of the idea of so framing these canes of various length and thickness, the first condition was the possession of the materials. But no vegetable



ORNAMENTATION OF THE BAMBOO ENDS.—FIG. 15.

growth of this kind was to be found among the mountains inhabited by the Aryas, for example, and if they possessed them, the climate of those altitudes was too severe to allow of such structures affording a shelter. In these vast and humid plains, on the contrary, these open-work habitations were the most suitable ones. He communicated these reflections to Doxius, who did not fail to insist upon it that all would be for the best, and in its place in the world, if he, Epergos, did not constantly interfere to disturb the established order of things. . . .

To this Epergos made no reply, and their host at that moment sent to invite them to partake of the evening meal.

The wife and daughter of Fau had then come out of their room and were standing behind the master, who was squatting down on mats, his arms resting on a kind of small bamboo tressels artistically worked. Before him was placed a low, wide shelf, covered with fine matting, on which were arranged bowls, bottles of glazed earthenware, and a quantity of small articles unknown to the visitors. In the middle a large open vessel contained steaming rice, with which were mingled pieces of fish. As soon as the strangers had been brought in and seated on mats arranged by the servants, the latter hastened to fill the bowls by means of long ladles. The master, taking two small sticks, which he used with dexterity, despite his obesity, rapidly conveyed the rice to his mouth. Epergos and Doxius had great difficulty in imitating his example, and were obliged to use their fingers to empty their bowl. Next they served each of the party with a warm beverage in delicately thin vessels. Then they brought fish cooked with herbs, and roasted birds. But the visitors had satisfied their hunger.

"Now is the time," said Epergos to Fau, "when it will be well to begin the curative process that is to restore thy health. Leave all these viands to thy servants, and let us talk, if it is agreeable to thee. We have admired thy habitation and thy gardens; but when one possesses such an abode one is little disposed to leave it. Dost thou ever go out?"

"How can I?" answered Fau; "I have scarcely strength to take a few steps in my garden."

"To-morrow morning, at sunrise, take twenty steps; thou wilt take thirty the day after, eating but little; forty the day after that, not eating more; and so for some days in succession; and at the end of twenty days thou wilt be in a condition to make an excursion outside. I saw a boat moored at the portico; well, thou wilt get into it and impel it thyself, having a servant to help thee when thou art tired. Gradually restore to thy body the habit of exercise and work which it has lost; this is the only means of recovering health."

Fau fixed his small black eyes on Epergos. "Is it to mock me that thou hast come to my house?" said he; "thou art, then, no magician! I am an old fool for having listened to thee. Away with thee! If thou hadst not eaten in my house I would make thee repent of thy impertinence."

"So," said Doxius, when he and his companion had quitted the house, "thou hast gained nothing for thy pains here; and now thou art gone, things will remain as we found them."

"I have not lost my time," replied Epergos; "I have left here words of truth. If the fat Fau does not profit by them himself, art thou sure that his wife, children and servants will forget them?"



DESCRIPTION OF DESIGN NUMBER 545

A HOUSE FOR TWO SMALL FAMILIES

SIZE OF STRUCTURE: Front, 24 ft., 2 in.; depth, not including front veranda and rear porches, 26 ft. For size of rooms, see floor plans. **HEIGHT OF STORIES:** First story, 9 ft.; second story, 8 ft., 4 in.

MATERIALS USED: For foundations, concrete walls, or brick or stone piers; for exterior walls of the first and second stories, pine siding; for gables and roofs, shingles.

COST: \$1,500, complete, including blinds. In another part of this book, see Price List for all kinds of Materials and Labor, on which this estimate is based.

SPECIAL FEATURES:

Where gravel is available, the foundation walls should be of concrete, which makes the best possible cellar walls. With the bottom well cemented, such a cellar is absolutely waterproof. The estimate is for such a cellar under the whole house. The specifications fully describe the preparation of the concrete and how the walls are built with it, which may be done with cheap and unskilled labor. Where gravel cannot be had, stone or brick piers should be used, with a smaller cellar. A saving of \$100 would be made by setting the house on posts and having no cellar.

This house furnishes complete housekeeping apartments for each of two families, and neither intrudes on the other; the whole house is equally available for one family, without alteration. When used by two families each enters by a separate outside door at the front, and the inside door between the entrance halls is kept bolted on both sides; when used by one family, one outside door is kept bolted, and the inside door is left open or is removed. The two outside doors present the appearance of a large double door.

The good size and fine appearance of this house, which is greatly enhanced by painting, gives it an apparent value, far beyond its cost. This is an ideal design for a young married couple of limited means. One floor, which is easily furnished, is certainly large enough for two. Ample closets and conveniences are provided, and even a "guest chamber" is available by having a sofa bed in the parlor. The parlor may be used as a dining-room also, when there is

company. Ordinarily the living-room, which has special ventilation to carry off the cooking odors, answers for a dining-room as well as for a kitchen. By letting the other floor they materially add to their income. From six to ten dollars a month, according to locality, can be had for the rented floor, therefore *this design provides a home for the owner, and in addition a fair rate of interest on the whole investment.* If the young couple are ambitious to make money fast, they can furnish

board as well as lodgings to their tenants. During the summer months, many families consisting of three or four adults, going to the country, would pay from \$30 to \$40 a week for the upper floor of this house, plainly furnished, and with substantial board.

The fact is, that a man and wife of simple tastes, who have a house like this, built in some favorite locality, scarcely need any other income than its possession affords. They need not be troubled about the loss of employment. The income derived from their tenant will about provide for groceries; their garden will furnish vegetables, with some to sell; their poultry yard and pig-sty will supply meat, which can

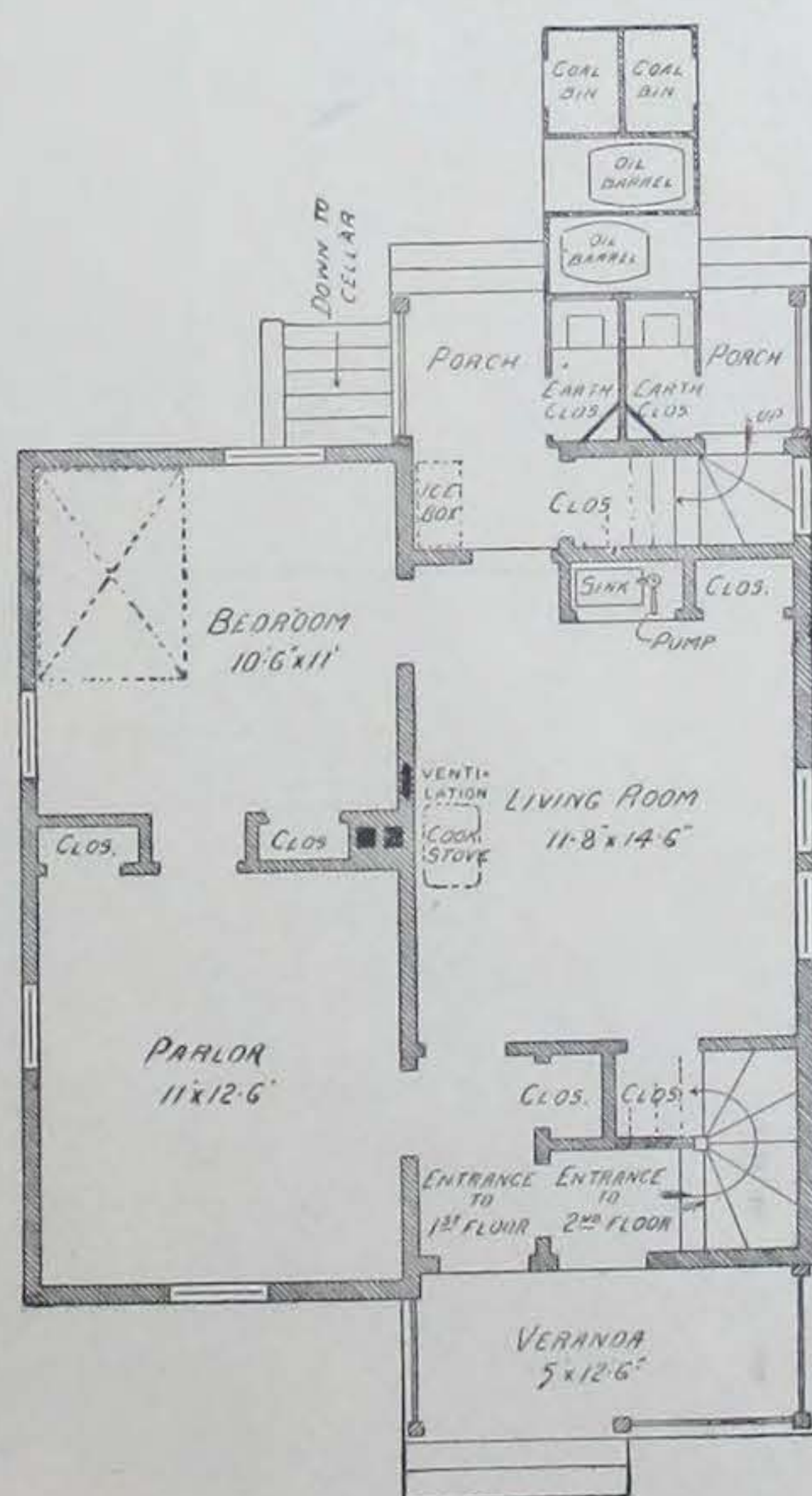
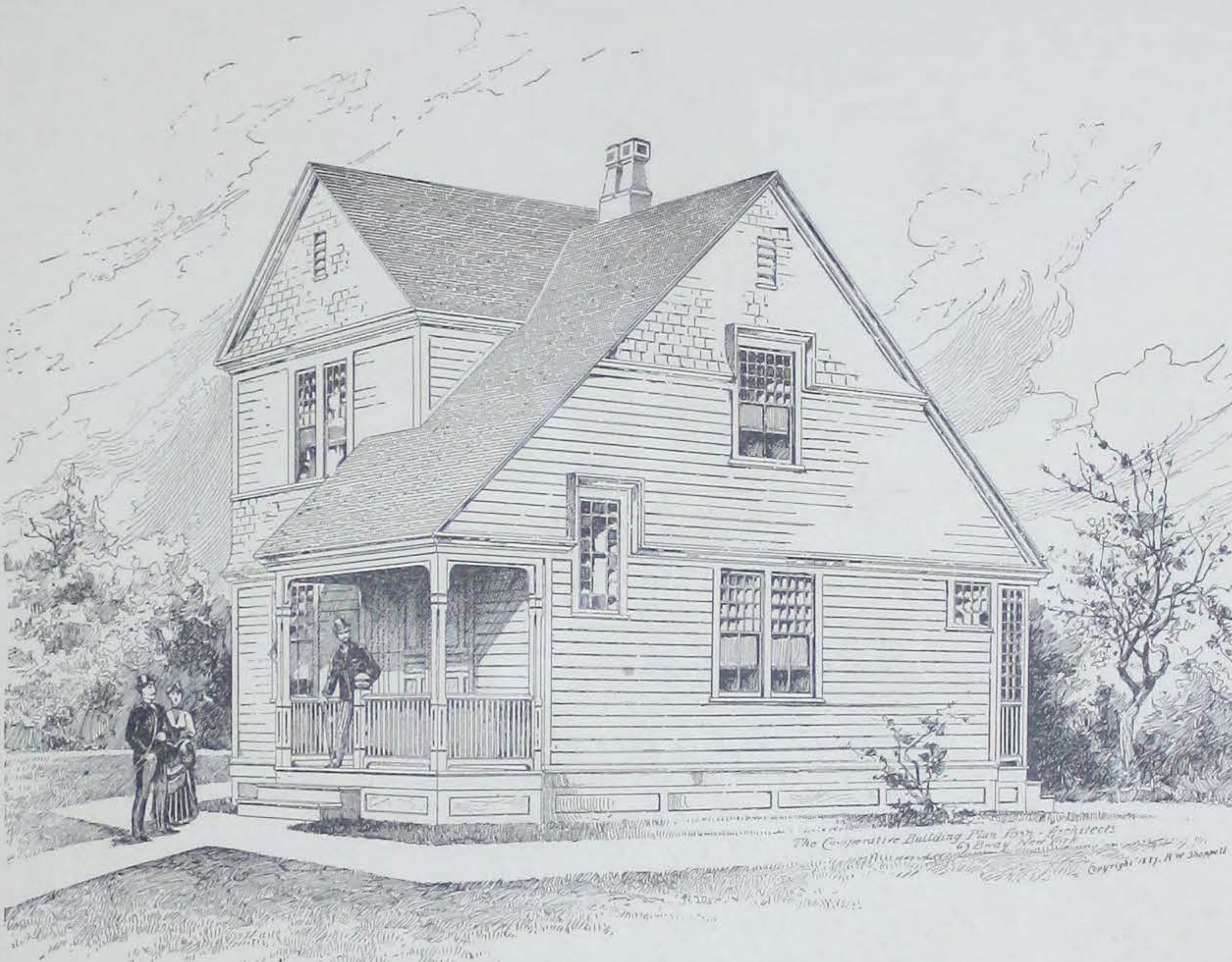
be supplemented by fish and game if there is fishing and hunting in the neighborhood. In short, they are self-supporting.

The ice-boxes are located within easy reach of the living-rooms, but away from the heat. The pumps are connected with a well or a

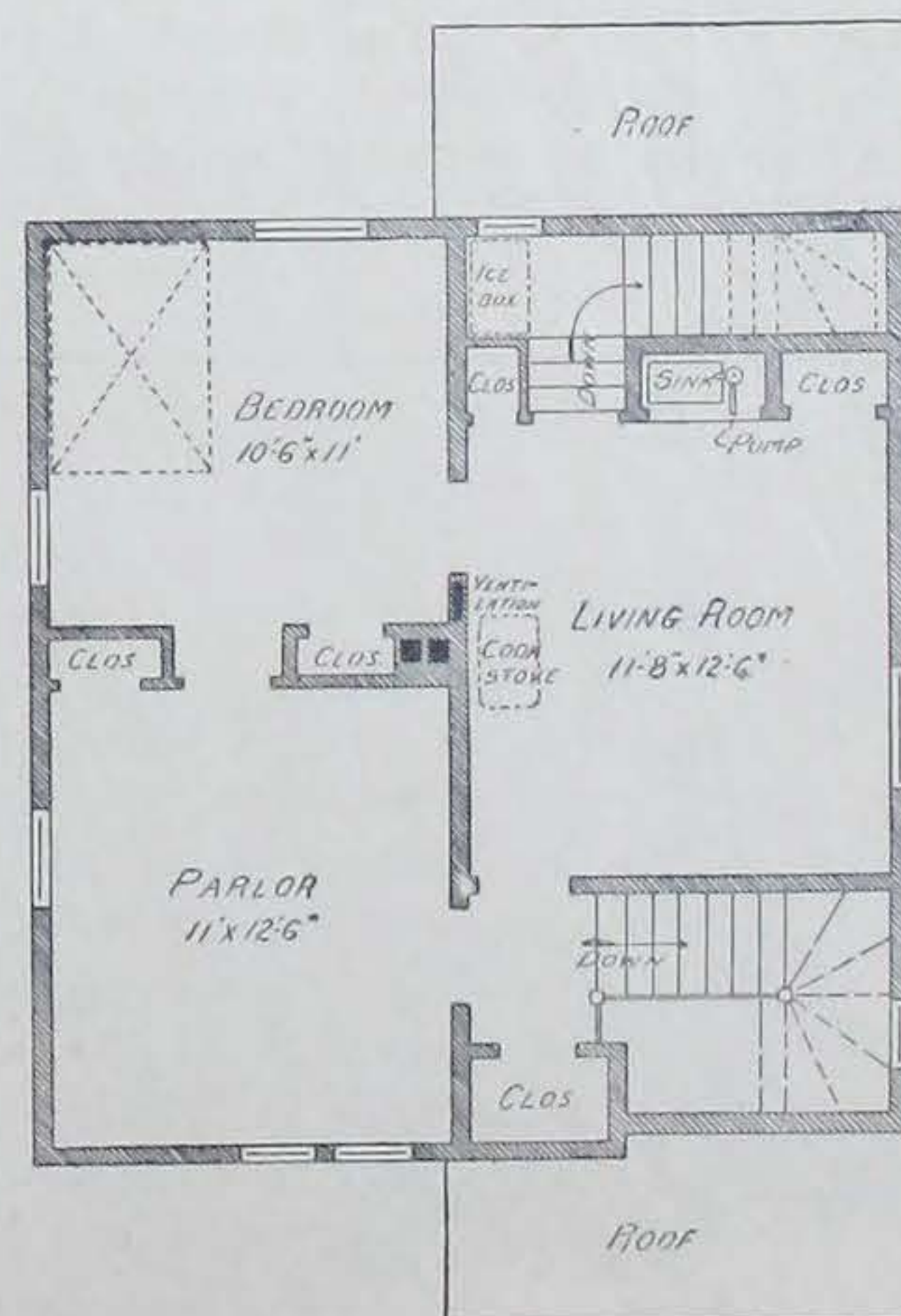
cistern. The water from the sinks is carried through a drain pipe to a cess-pool in the back yard. Odorless earth closets, the cleanest and healthiest device for the purpose intended, are placed outside of the main walls, but where they are of easy access. Oil is cheap and good for fuel (used in the recently invented "cartridges") as well as for lights, and a place is provided for keeping a barrel of it. The living-rooms will receive the hardest usage, therefore their walls are wainscoted with beaded ceiling boards up to a height of three feet. The halls are wainscoted also, and all the closet walls are ceiled with boards.

The specifications for this house, which describe a number of economies that keep the cost down, call for good work and the best materials throughout.

Large scale drawings of all elevations, floor plans, all details and framing plan, also full specifications, detailed estimate, color sheet and blank contracts for this design are furnished by the architects, The Co-Operative Building Plan Association, 63 Broadway, New York, for \$15.



FIRST FLOOR. DESIGN NO. 545



SECOND FLOOR. DESIGN NO. 545

ESTIMATES GUARANTEED

The costs of structures as given in our books must be regarded as only approximate. In books, it is impossible to give costs that would prove to be correct for every locality. Therefore, from and after this date, for those who order Working Plans, Specifications, etc., for any designs found in our books, we will make careful special estimates for such designs, based on their local prices for materials and labor. *We will guarantee that contracts can be placed at figures not exceeding such estimates,* otherwise, our clients may send back to us the Working Plans, Specifications, etc., and we will return to them the fees paid for the same.

THE CO-OPERATIVE BUILDING PLAN ASS'N,
ARCHITECTS,

January 1, 1888.

63 BROADWAY, N. Y.

WORKING PLANS, DETAILS, SPECIFICATIONS, &c.

See notes below about Alterations and Special Designs.

WE have been asked why we do not give full Working Plans, Drawings of Details, Specifications, &c., in this book. We answer that to do so would reduce the number of designs in a book of this size to three or four. Most people want to see the plans and descriptions of a large number of houses, to decide which they like best. Besides, our Working Drawings (the Details are shown full size) are on such large sheets that it is impossible to reduce them to book or paper size without losing much of their value. It is important, also, that the owner should be in correspondence with the architects to have everything explained that he does not understand, and to advise him during the progress of the work.

A Modern House *cannot* be constructed without the aid of

WORKING PLANS, DETAIL DRAWINGS AND SPECIFICATIONS.

Much of the distinguishing beauty of a Modern House comes from correctly carrying out the Details of Cornices, Verandas, Windows, Doors, Gables, Trim, Mantels, Staircase, Colors, &c., &c. Builders not familiar with these Details cannot construct them without exact Drawings and Specifications.

By the practical co-operation effected by our books bringing our designs before thousands of people, we are enabled to supply these Drawings, &c., at *one quarter* the rates usually charged by architects. Our Drawings, &c., are more complete than are usually furnished; our figures and estimates are more reliable because they are continually proved by actual building.

When Drawings, &c., are used (insuring against mistakes and waste of both material and time), the Modern House costs no more, and often less than the old-fashioned structure; for the architect has not only improved the arrangement of rooms, and made the Modern House beautiful, but he has studied economy and insured its lower cost.

Many people think it an unnecessary expense to invest in Plans, &c.; that their builders can draw up Plans or follow rough sketches of their own. *This is a great error.* It would be real economy to

pay even five times as much as our charges for proper Drawings, &c. Without them mistakes are sure to occur, and to rectify a single mistake often costs more than the architectural services.

Again, by our Specifications the builder is bound to put in good qualities of material and workmanship; when not carefully specified in every particular there is sure to be misunderstandings and trouble as to the thousand-and-one things that enter into the construction; the result is always loss to the owner.

Beside the indispensable aids of Plans, Details and Specifications, there is the utmost value in having

A BILL OF QUANTITIES,

which gives the true quantities of all the materials required, and enables the owner to make all of the purchases of materials, if he prefers, and to build the house by days' work.

In addition to the foregoing we furnish

A COLOR SHEET,

which gives a number of elevations properly colored, with directions for mixing and applying the paints, the right kind of brushes to use, &c. This sheet not only instructs the painter, but enables the owner to do his own painting, if he prefers.

We also send an extra sheet containing Detail Drawings of an approved method of building cheap, durable and firm foundations, particularly useful for small cottages, where it is necessary to keep the cost as low as possible. The same sheet shows drawings of an approved cistern with filter. Also, duplicate blank forms of

BUILDING CONTRACTS

ready for use in case the owner wishes to build by contract.

The reliability and thoroughness of our work is attested by hundreds who have built from our Drawings and Specifications. Please see a "Page of References" in another place.

PRICE LIST OF PLANS, SPECIFICATIONS, ETC.

UPON receipt of price annexed we will send by mail or express, charges prepaid, the Working Plans, Specifications, Detail Drawings, Bill of Quantities, the Extra Detail Sheets on Colors and Foundations, and Building Contracts for any of the designs mentioned below. Remit to The Co-operative Building Plan Association, 191 Broadway (P. O. Box 2702), New York City, N. Y. If preferred, we will send C. O. D.

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NOTE ABOUT ALTERATIONS

ANY internal changes required, such as shifting partitions to make rooms larger or smaller, adding closets, building fireplaces in place of flues, &c., can be clearly indicated to the workmen by the owner himself, when the large Working Plans are spread out before them. Therefore, if the alterations are unimportant, the Working Plans and Specifications as per price list above are quite sufficient. Where the desired changes alter the external dimensions and, consequently, the appearance of the elevations, it is generally advisable to have us make the changes in the Working Plans and Specifications.

For altering plans we charge extra, but do not set a price for same, as we cannot tell how much work is involved until we know what the alterations are. Upon receiving a description of the alterations required, which should always be accompanied with a diagram, no matter how roughly drawn, we will make a price according to the amount of work involved.

ABOUT SPECIAL DESIGNS

IF none of our designs, or modifications of them, suit the intending builder, we are glad to make original designs to meet their requirements, or work out and put in proper shape any rough drawings of their own. See Miscellaneous Notes, page 74.



VIEW OF A HALL AND STAIRCASE

THE HALL AND STAIRCASE

THE narrow, cold and cheerless staircase hall will soon be a thing of the past. The hall is now made a useful and beautiful feature of every good design.

It should be square rather than long and narrow, thus making it a room rather than a passage.

It should have a fireplace, not only for the sake of comfort and beauty, but for the reason that a fireplace in the lower hall ventilates the whole house, more or less. The impoverished air from adjoining rooms and from the upper floors (bad air is heavy and descends) is attracted to it and carried off.

It should have a beautiful staircase (not necessarily expensive), with risers not over seven inches, treads not less than ten inches, and at least one platform to afford a rest and make the ascent easy. Winding steps should never be built where they can be possibly avoided.

It should display some stained glass, if stained glass is wanted. The hall does not require full light; a subdued light is better.

It should have a hat and coat closet.

It should be protected from cold and draughts by a vestibule or storm doors during the winter season.



DESIGN No. 245. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 245*

SIZE OF STRUCTURE: Front, 32 ft., 6 in. Side, 25 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 9 ft., 6 in.

MATERIALS: Foundation, posts; First Story, clapboards; Gables, shingles; Roof, shingles.

COST: \$700, complete.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

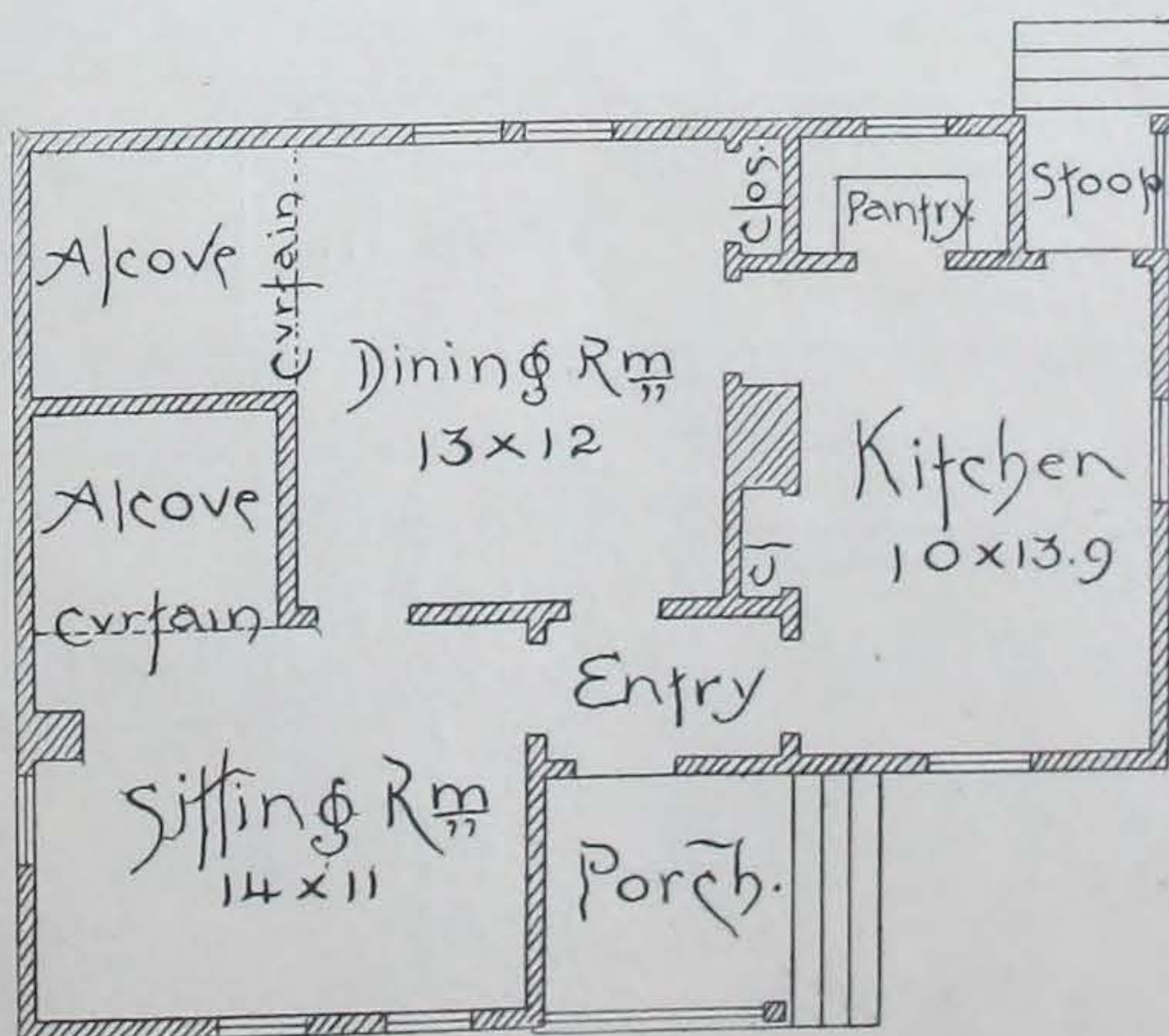
This design can be reversed, enlarged, reduced or altered to suit special wants.

* The illustrations and descriptions of our designs preceding this number—viz., designs from No. 1 to No. 167 (inclusive)—are found in our large book, "How to Build, Furnish and Decorate" (Price, \$5), and designs from No. 168 to No. 244 (inclusive) in "Shoppell's Modern Houses, No. 1" (Price, \$1).

The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—A cellar is provided under the kitchen, with an outside entrance.

Store-room over ceiling, reached by a scuttle.



FLOOR PLAN. NO. 245

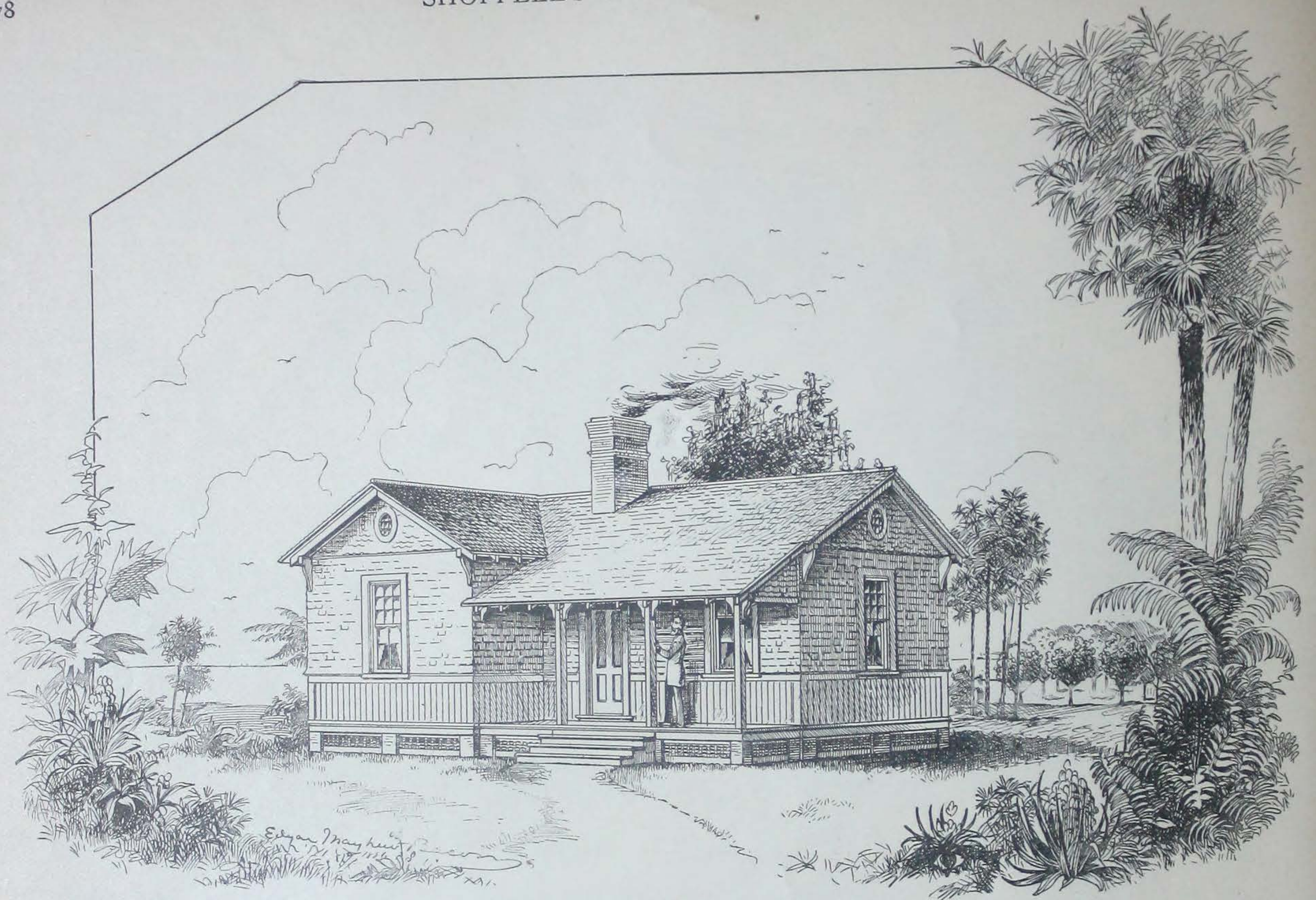
The leading features of this design are the alcoves, intended for the reception of beds, separated by curtains from the main rooms. During the day the closed curtains conceal the beds, and they are not the least intrusive on the living-rooms; at bedtime, when everything is put away and in order, the curtains are drawn back for the night, and we have, practically, two large bed-rooms.

Many people of refinement and good taste must commence with small cottages if they would live in houses of their own. We feel sure that this plan will be very suggestive to them.

We say *commence* with small cottages. There always seems a tide in

the affairs of men who stop paying rent that leads on to fortune. Larger houses are among the probabilities; the small ones will meet with ready sale, as there are many who wish to start at that point.

Suggestions for this design were contributed by a lady who takes much interest in these matters—Miss Nellie Bailey, of Illinois.



DESIGN No. 246. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 246

SIZE OF STRUCTURE: Front, 35 ft. Side, 23 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 10 ft.

MATERIALS: Foundation, brick piers; First Story, shingles; Gables, shingles; Roof, shingles.

COST: \$500, complete.

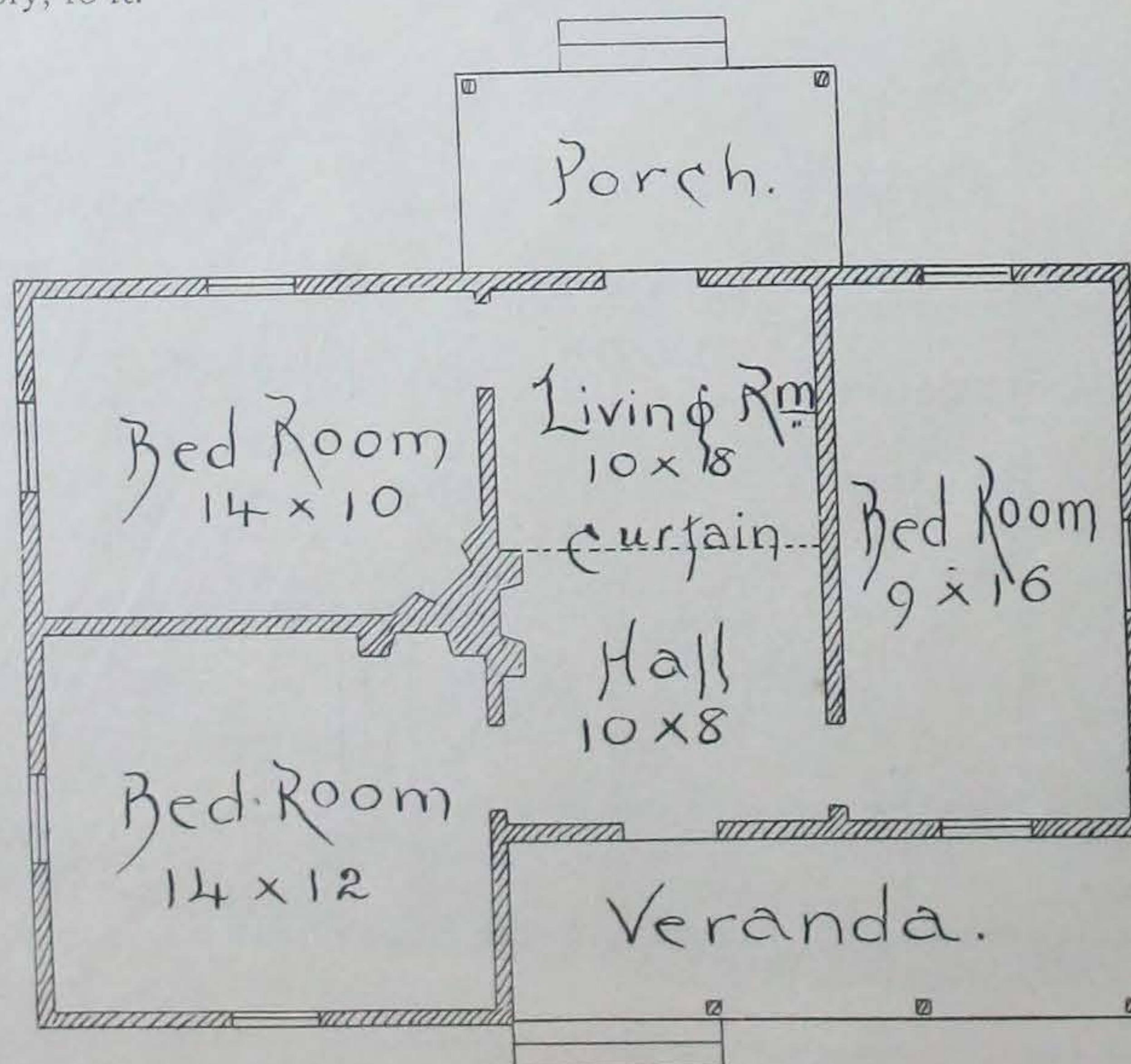
[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

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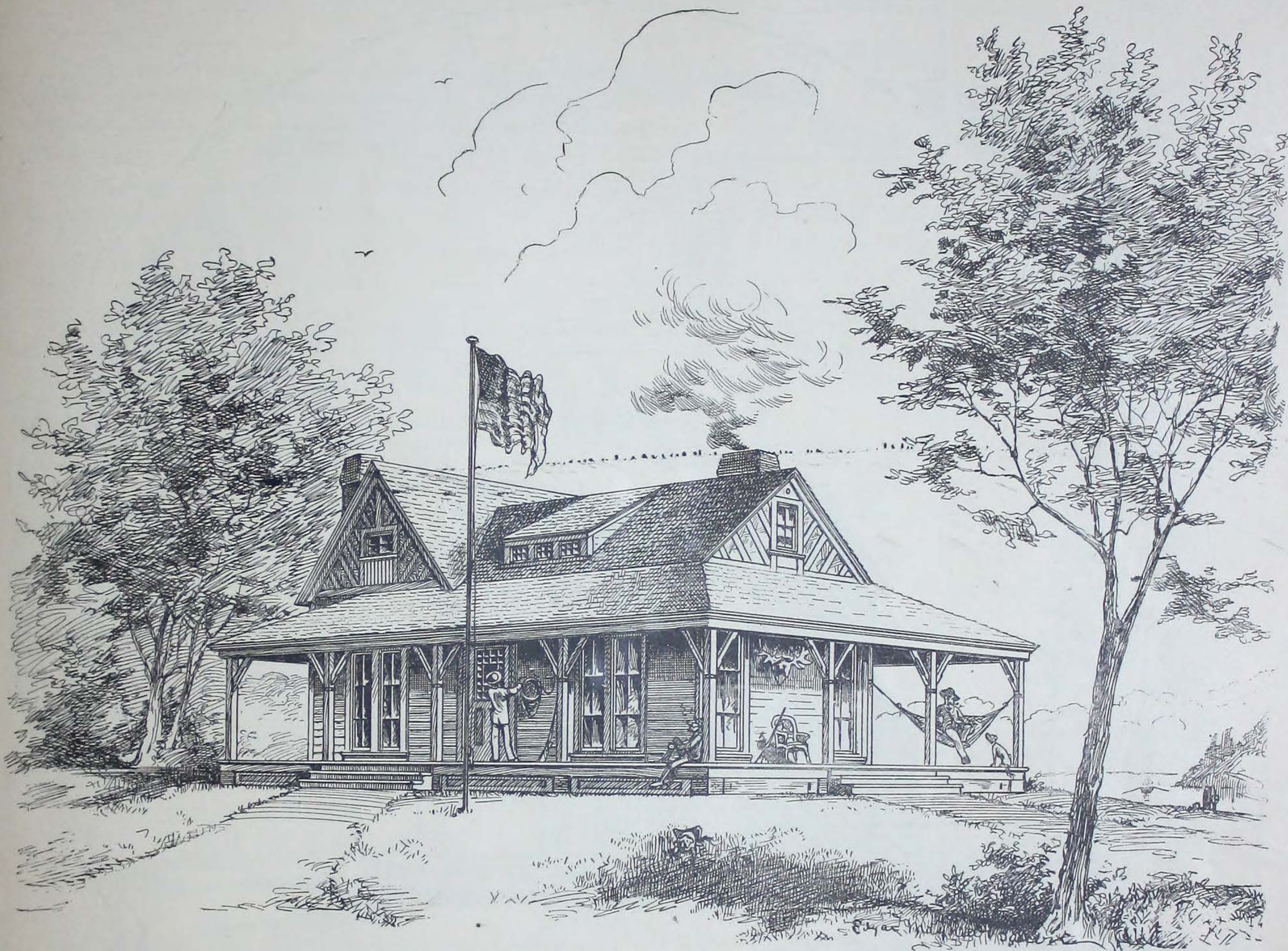
FLOOR PLAN. NO. 246

SPECIAL FEATURES. — Designed for and built in Florida. No cellar. The kitchen is a detached cabin in the rear.

When the curtain is drawn, the living-room and hall make a dining-room 10x16—quite a hospitable space for so small a cottage. While the table is being prepared for meals in the rear part of the hall, the curtain will separate it from the front part, where the family or friends are being entertained.

Adapted for the North, the smallest bed-room should be used as a kitchen, or a lean-to kitchen built where the back porch now is; also a cellar under half of the house. The lean-to would cost \$75; the cellar, \$50.

There is a fine circulation of air through the hall and living-room, making this a very desirable plan for a warm climate or for a summer cottage anywhere.



DESIGN No. 247. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 247

SIZE OF STRUCTURE: Front, 36 ft., 6 in.; including veranda, 43 ft., 6 in. Side, 28 ft., 6 in.; including veranda, 35 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 9 ft.; Second Story, 7 ft., 6 in.

MATERIALS: Foundation, wood posts; First Story, clapboards; Gables, half timbered; Roof, shingles.

COST: \$1,400, complete.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

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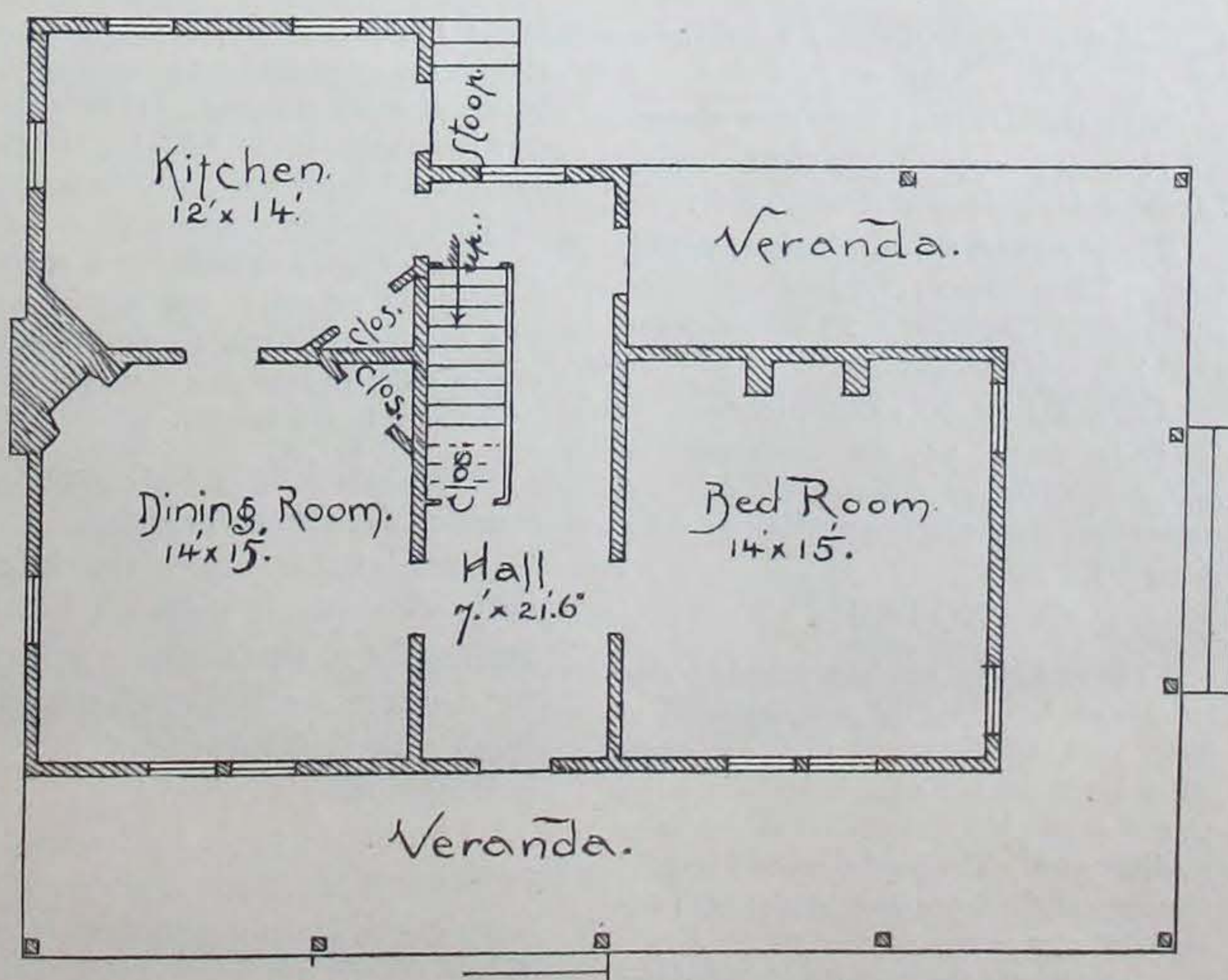
Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Designed and built for a shooting lodge, there is no cellar, but one can be built easily under the kitchen part, with an outside entrance. With plank walls, the cellar would cost \$25; with brick walls, \$50.

The ample veranda and cool hall running through the centre make this a very desirable design for a summer cottage.

Three rooms and storage space in the attic.



FIRST FLOOR. NO. 247



DESIGN No. 248. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 248

SIZE OF STRUCTURE: Front, 21 ft., 6 in. Side, 40 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 9 ft.; Second Story, 8 ft.

MATERIALS: Foundation, wood posts; First Story, clapboards; Second Story, clapboards; Gables, paneled; Roof, shingles.

COST: \$1,200, complete.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

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Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase,

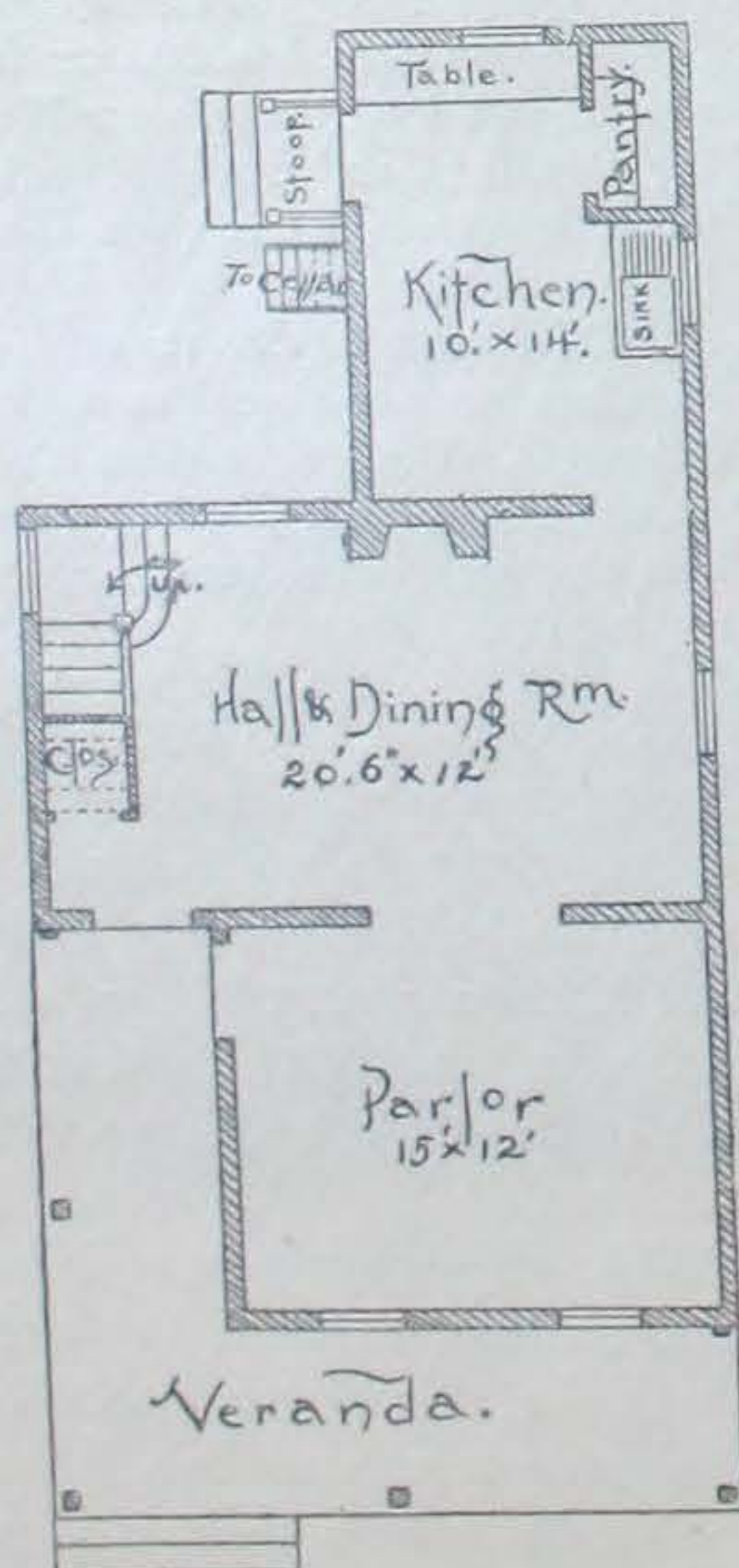
Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

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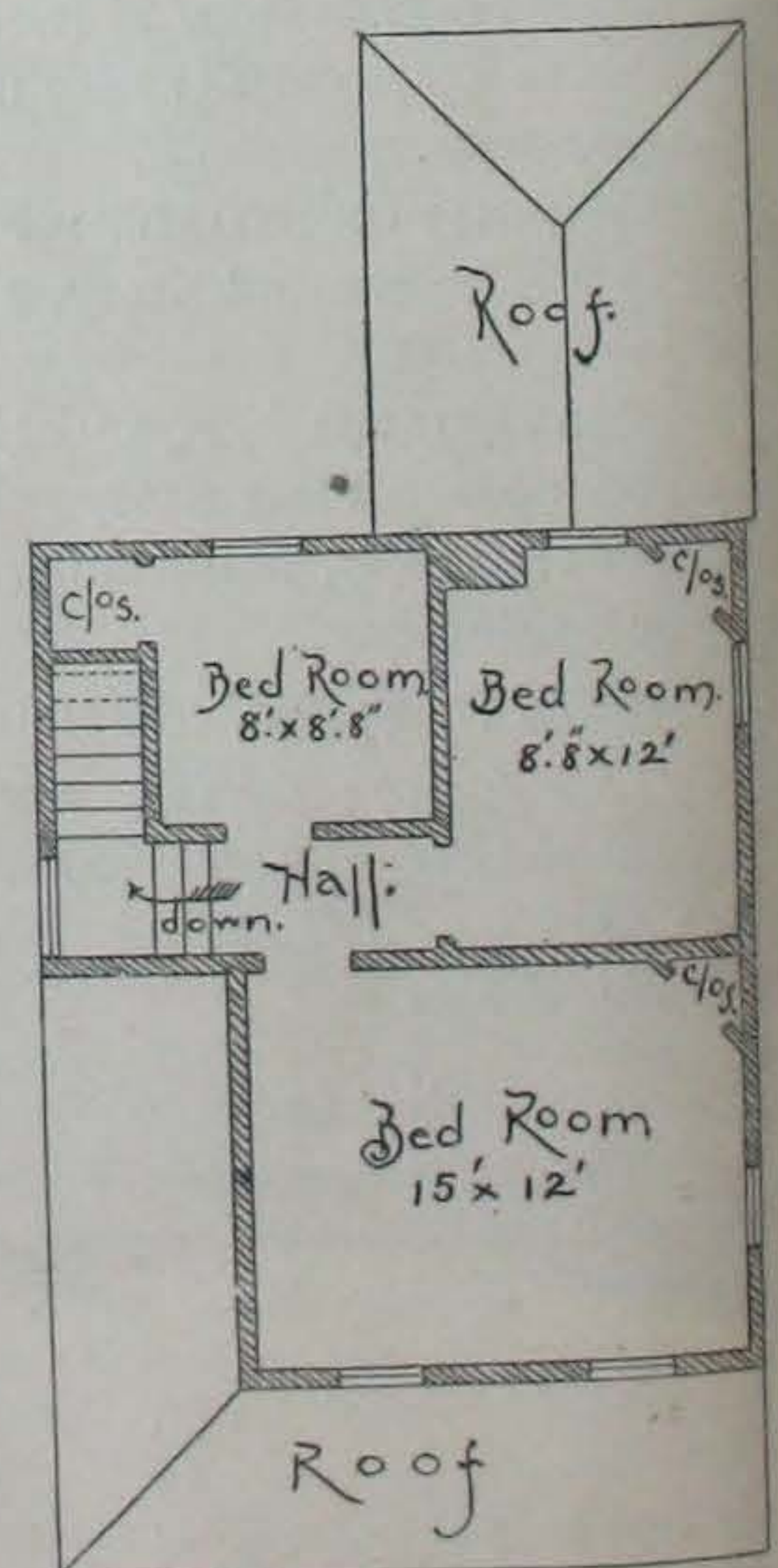
SPECIAL FEATURES.—Specially adapted for the seaside.

Small cellar under the kitchen only, with plank walls—a low-cost arrangement that is quite sufficient for a summer cottage, where an ice-box or a refrigerator is of more importance than a cellar.

The use of posts for foundations is a great economy. Posts make very good, lasting and firm foundations where no excavating is necessary.



FIRST FLOOR. NO. 248



SECOND FLOOR. NO. 248

DESCRIPTION OF DESIGN NUMBER 249

COST: \$1,300, complete.

This is simply a modification of the preceding design [Number 248] the change being a different location of the chimney and an additional chimney. The object is to provide sufficient heat for winter occupancy.

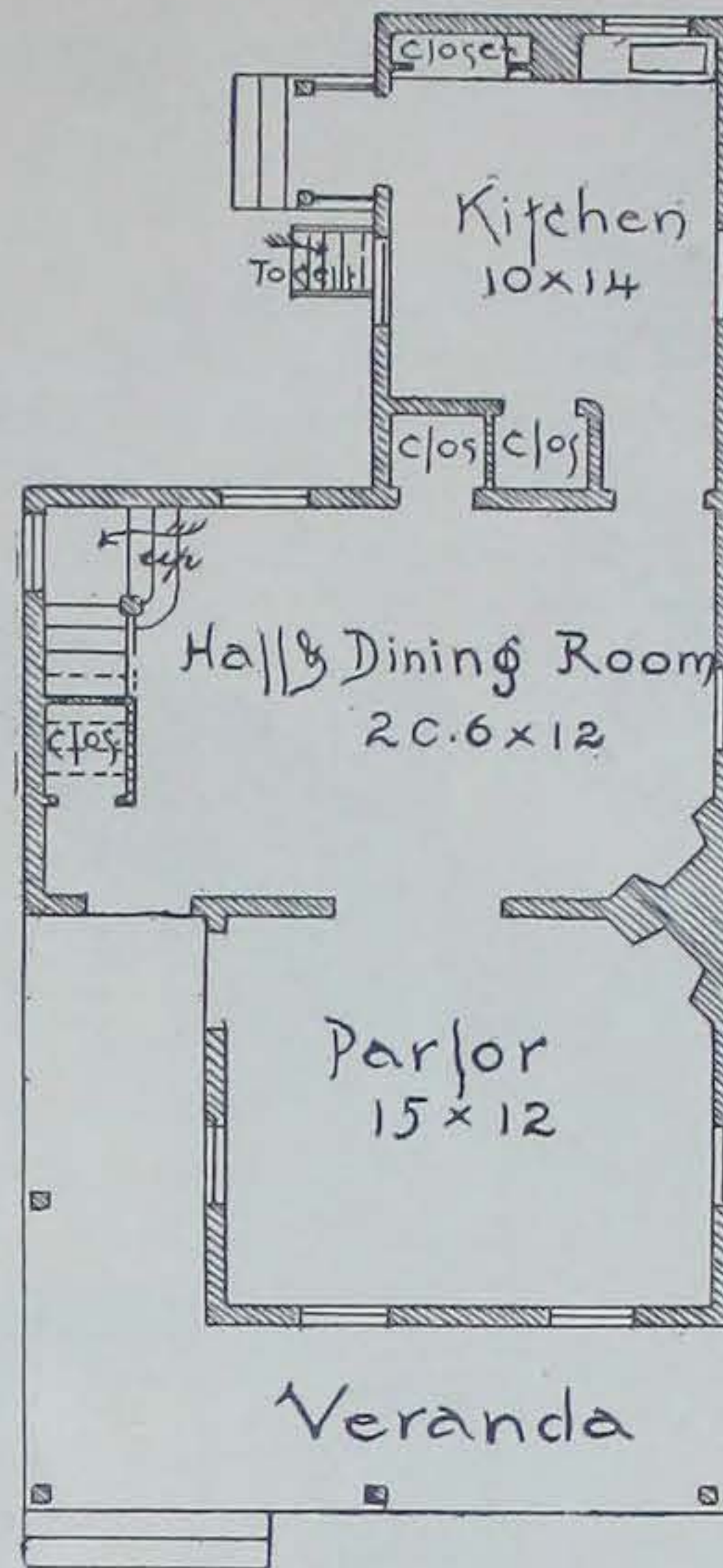
[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

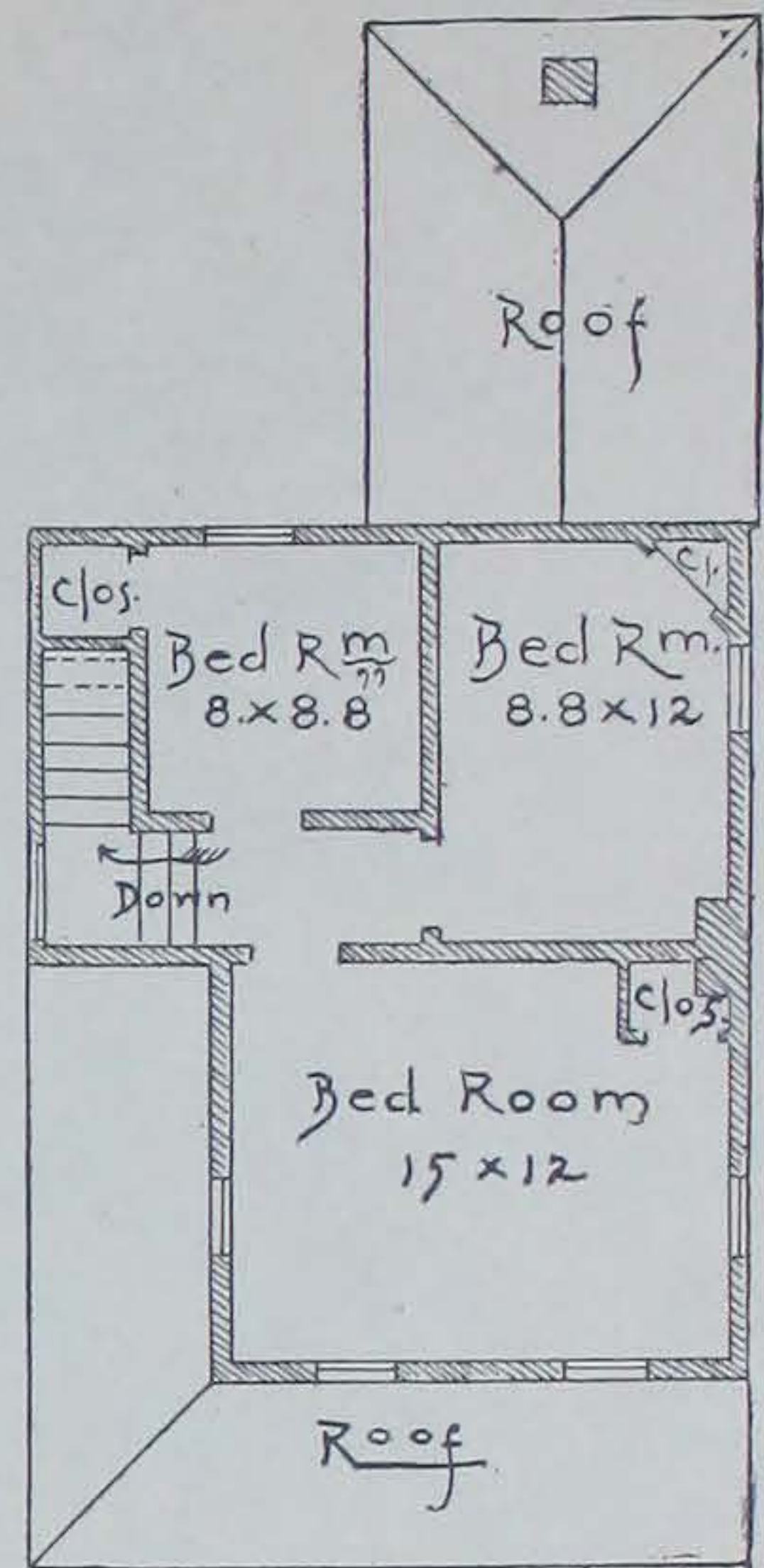
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FIRST FLOOR. NO. 249



SECOND FLOOR. NO. 249

DESCRIPTION OF DESIGN NUMBER 250

COST: \$1,300, complete.

This is another design, with an exterior appearance like Number 248. The plans are like Number 249, except that the front veranda is left off and a bay-window is added. This is intended for an all-year residence.

A cellar under the whole house, with walls and foundations of brick or stone, would cost \$200 additional.

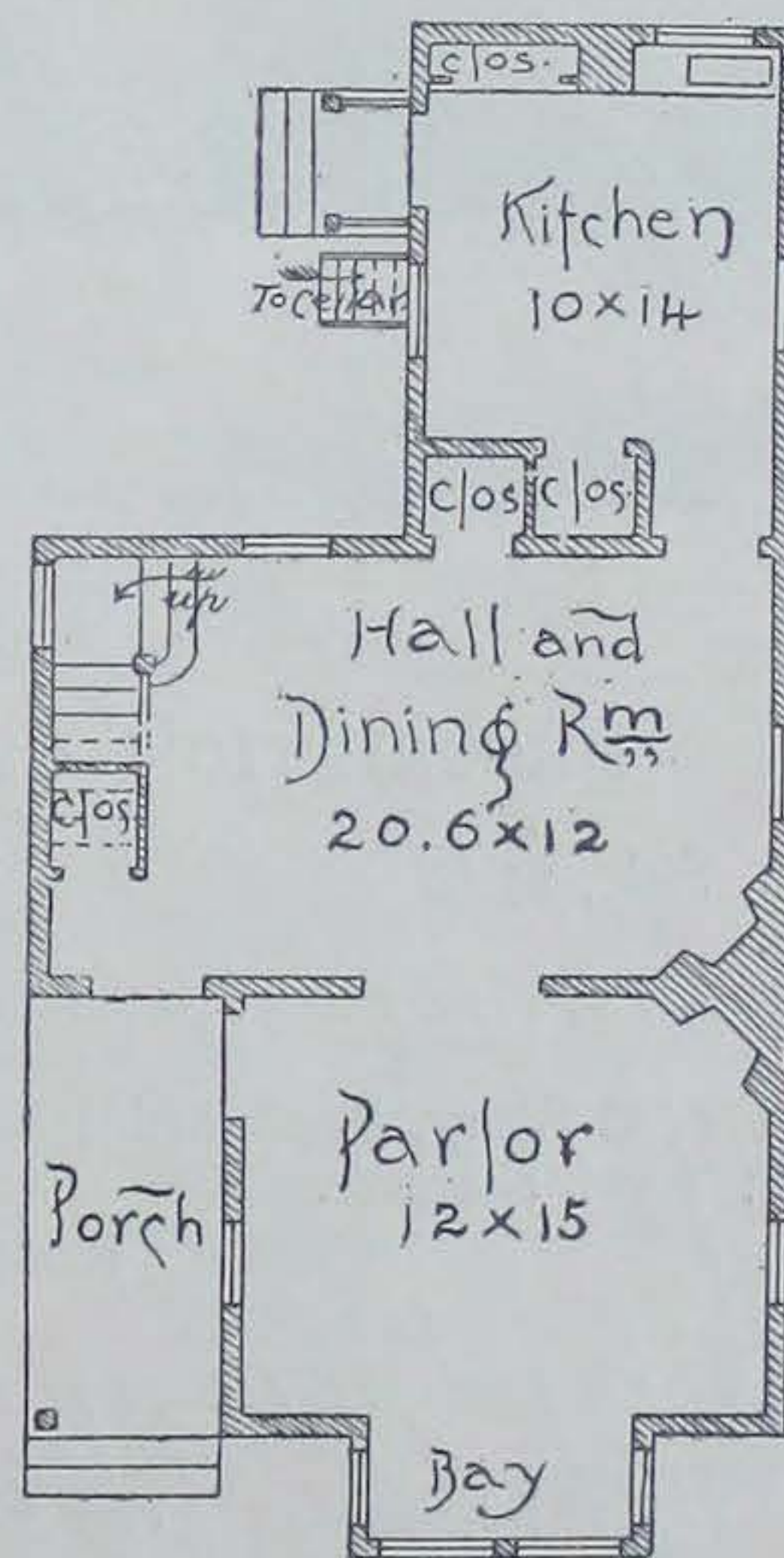
[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

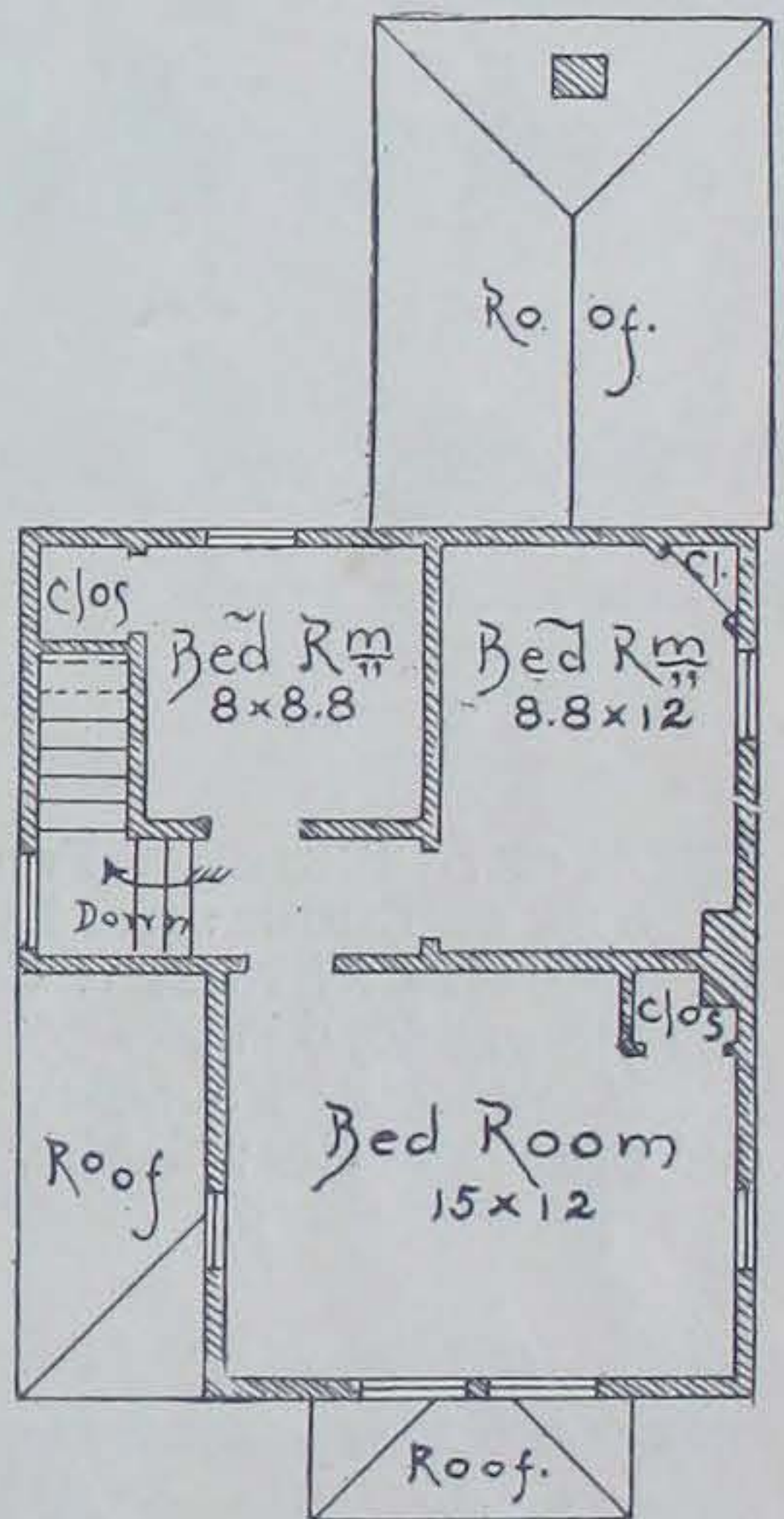
The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

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FIRST FLOOR. NO. 250



SECOND FLOOR. NO. 250

DESCRIPTION OF DESIGN NUMBER 251

SIZE OF STRUCTURE: Front, 20 ft., 8 in. Side, 24 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 8 ft., 8 in.; Second Story, 8 ft.

MATERIALS: Foundation, wood posts set in concrete, or brick piers; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$800, complete.

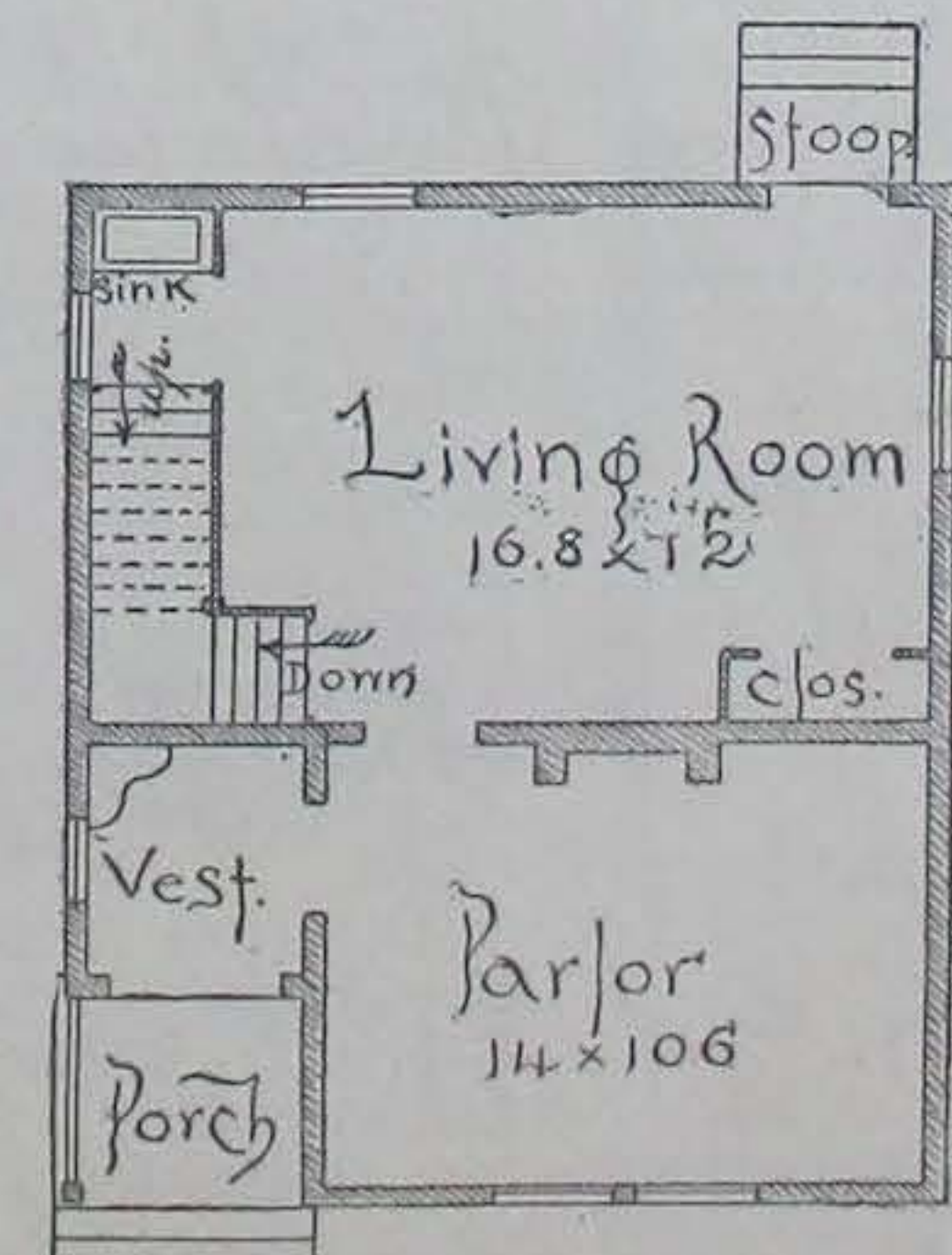
[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—The exterior somewhat in the same style as design Number 248, but more compact.

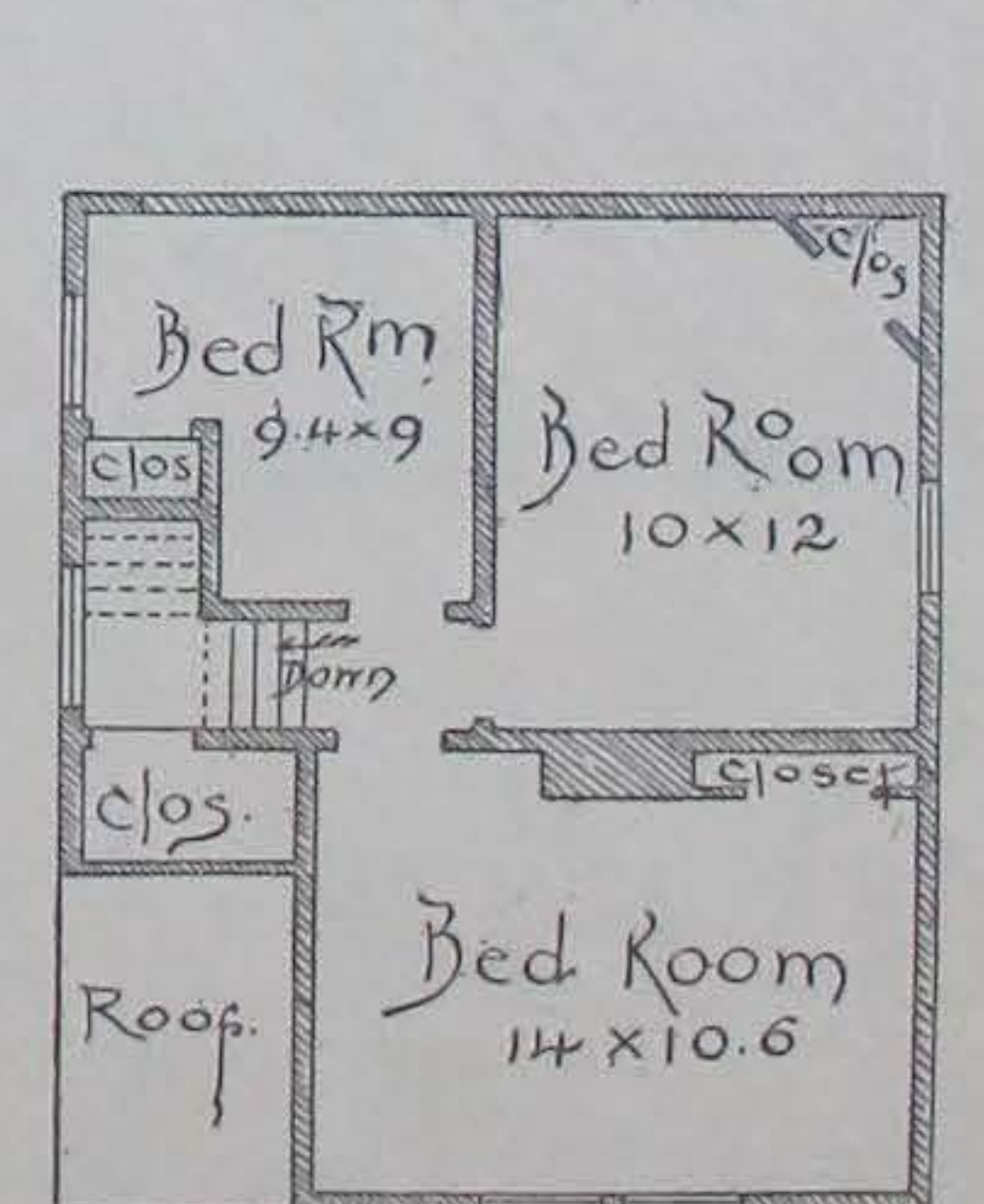
Cellar under half of the house.

A lean-to kitchen extension can be built at an additional expense of \$75.

Except in the severest weather, a good fire in the kitchen stove will warm the whole house.



FIRST FLOOR. NO. 251



SECOND FLOOR. NO. 251



DESIGN No. 252. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 252

SIZE OF STRUCTURE: Front, 30 ft. Side, 35 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 10 ft.; Second Story, 8 ft., 6 in.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$2,000, complete.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

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modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

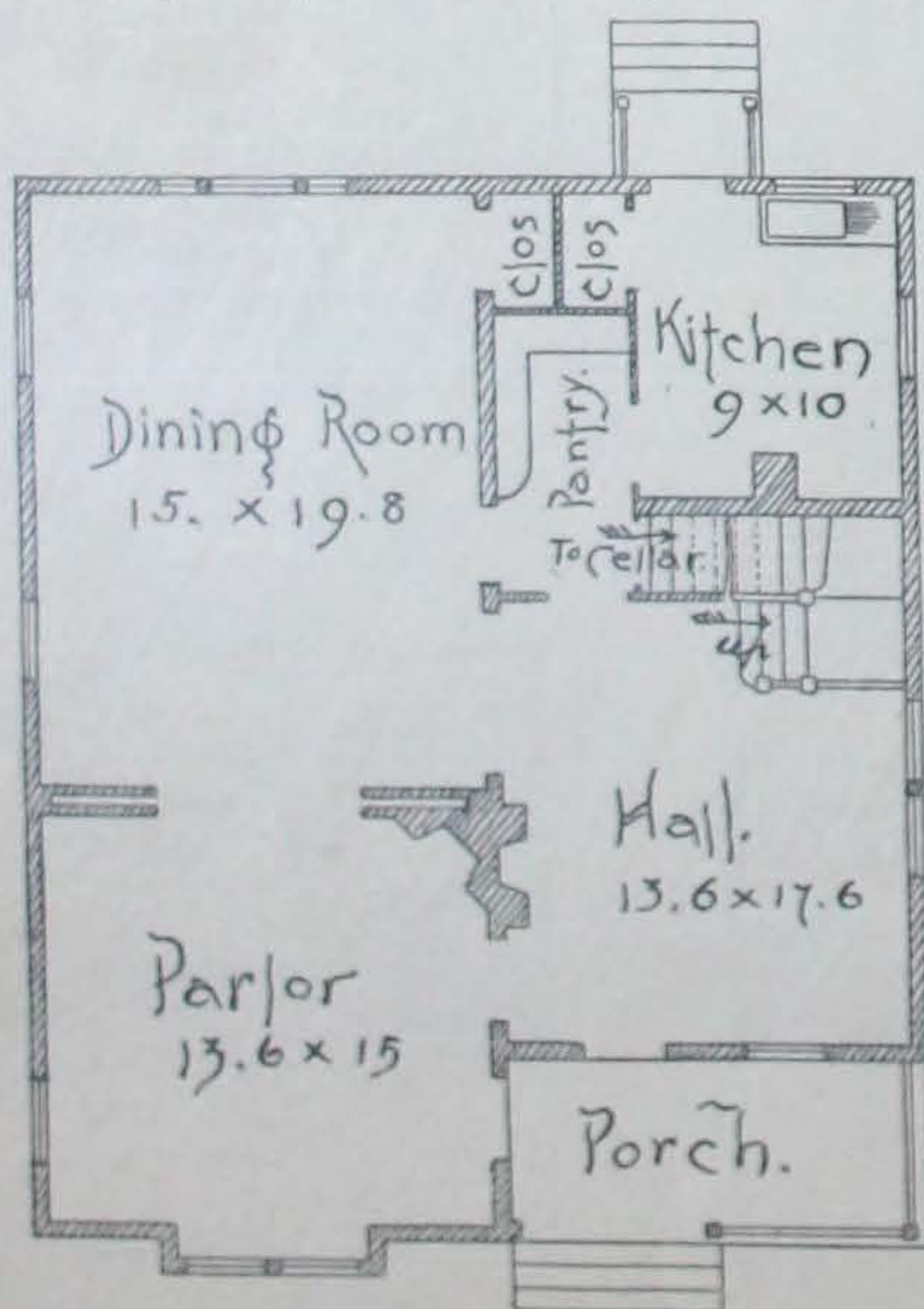
SPECIAL FEATURES.—Cellar under the dining-room only.

Fine, wide openings between rooms.

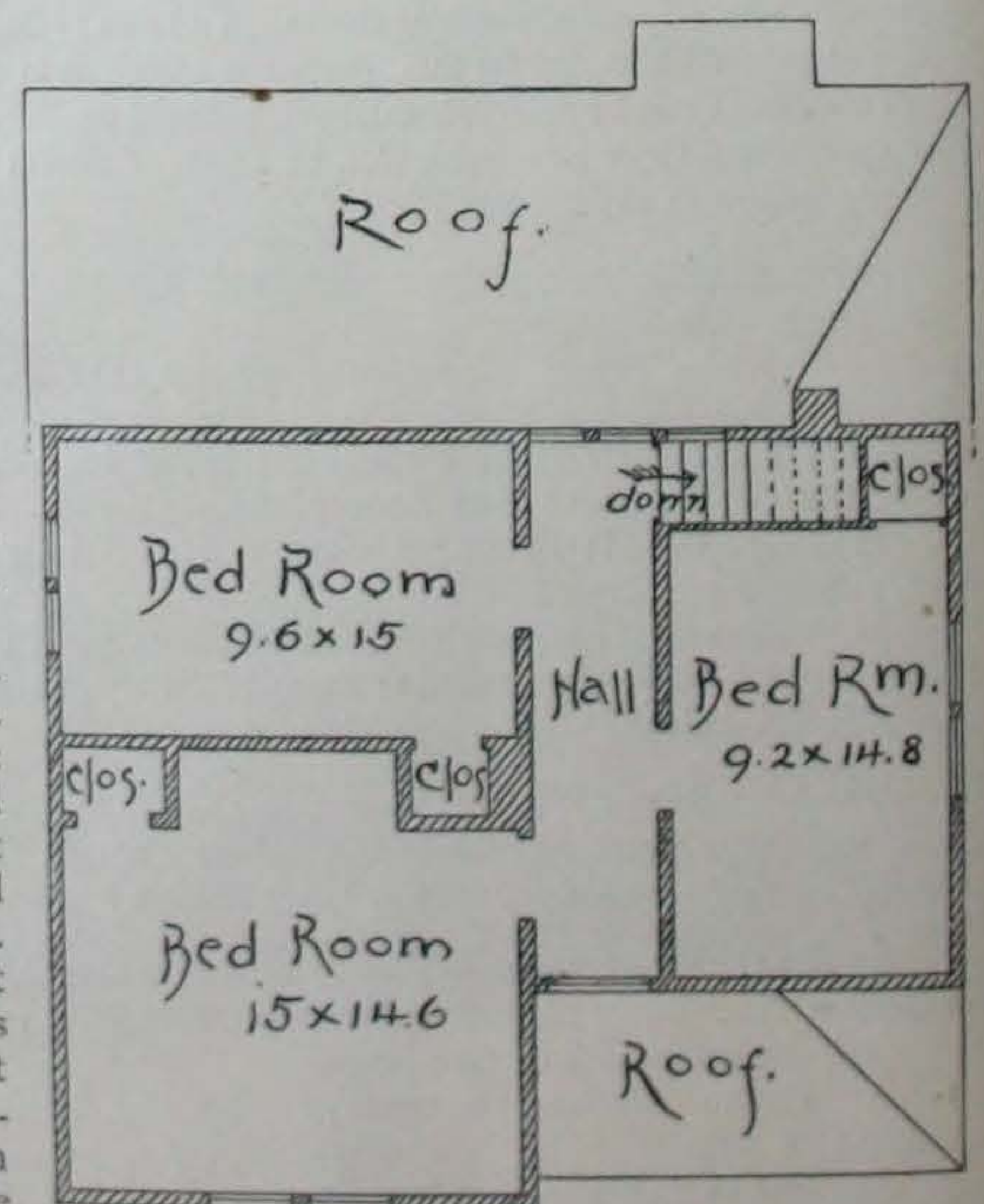
All the rooms on both floors are of good size, except the kitchen. There is the greatest diversity of opinion regarding the proper size of a kitchen. We are inclined to recommend

small ones for small houses, well ventilated, like this one, where the draught from the window to the back door keeps it cool; with a large pantry and closets and every inch of space on the walls utilized for utensils. A small kitchen, well arranged, saves steps.

The hall has a fireplace and a pretty staircase: if it were named from its use, it should be called the sitting-room. One of the most sensible as well as one of the most fashionable features of modern houses is a square and ample hall.



FIRST FLOOR, NO. 252



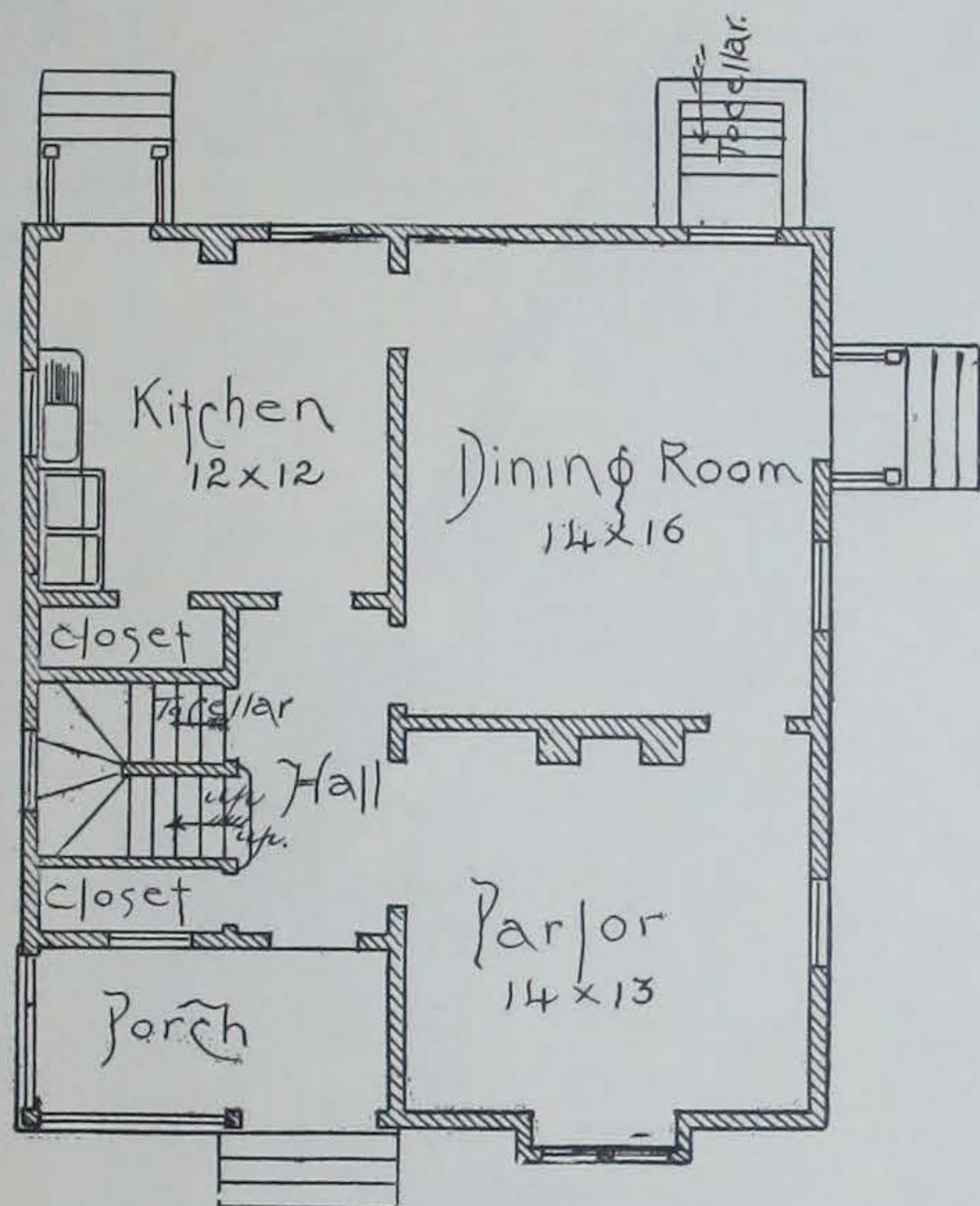
SECOND FLOOR, NO. 252

DESCRIPTION OF DESIGN NUMBER 253

SIZE OF STRUCTURE: Front, 27 ft., 6 in. Side, 30 ft., 6 in.
SIZE OF ROOMS: See floor plans.
HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft.
MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$1,800, complete.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]



FIRST FLOOR. NO. 253

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

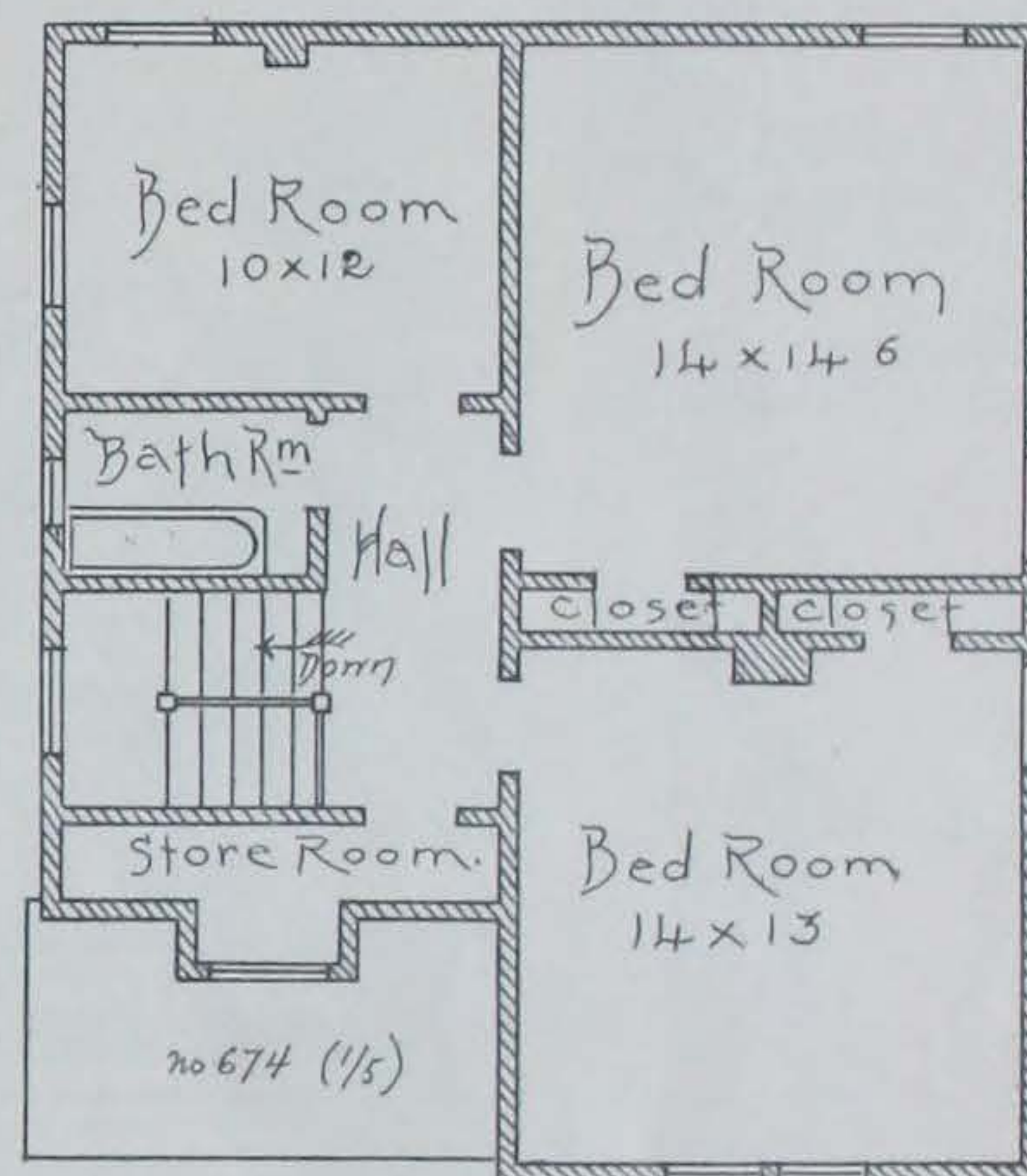
Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—The exterior is similar in style to the preceding design, Number 252, but not so plain. The plans are reversed, and more room is given to the kitchen.

Cellar under the whole house, with both outside and inside entrance. Storage-room in the attic, reached by a scuttle. Plenty of closets. Bath-room.

These square designs utilize space to the best advantage.

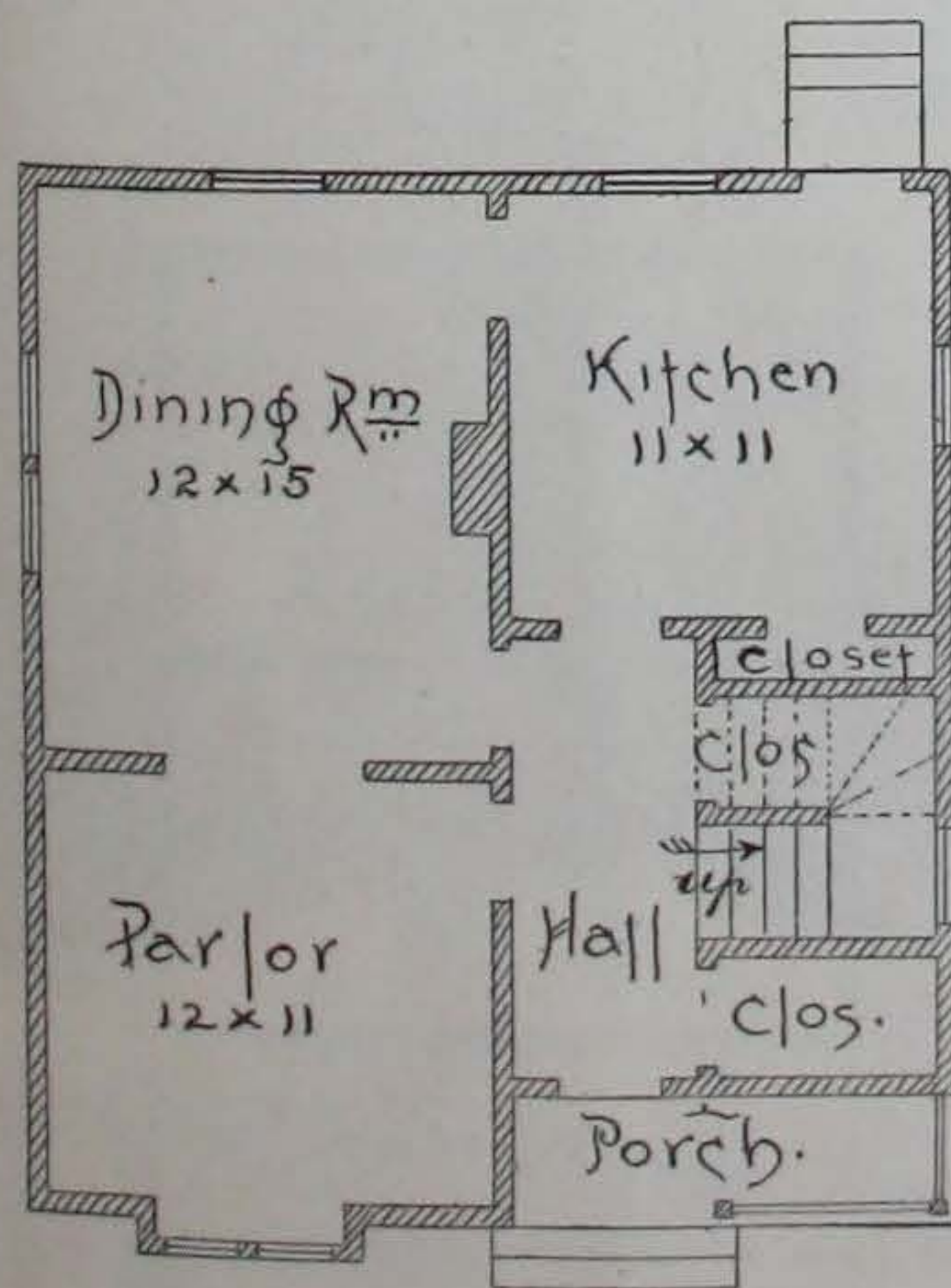


SECOND FLOOR. NO. 253

DESCRIPTION OF DESIGN NUMBER 254

SIZE OF STRUCTURE: Front, 24 ft., 6 in. Side, 27 ft., 6 in.
SIZE OF ROOMS: See floor plans.
HEIGHT OF STORIES: First Story, 8 ft.; Second Story, 7 ft., 6 in.
MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$1,050, complete.



FIRST FLOOR. NO. 254

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

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houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

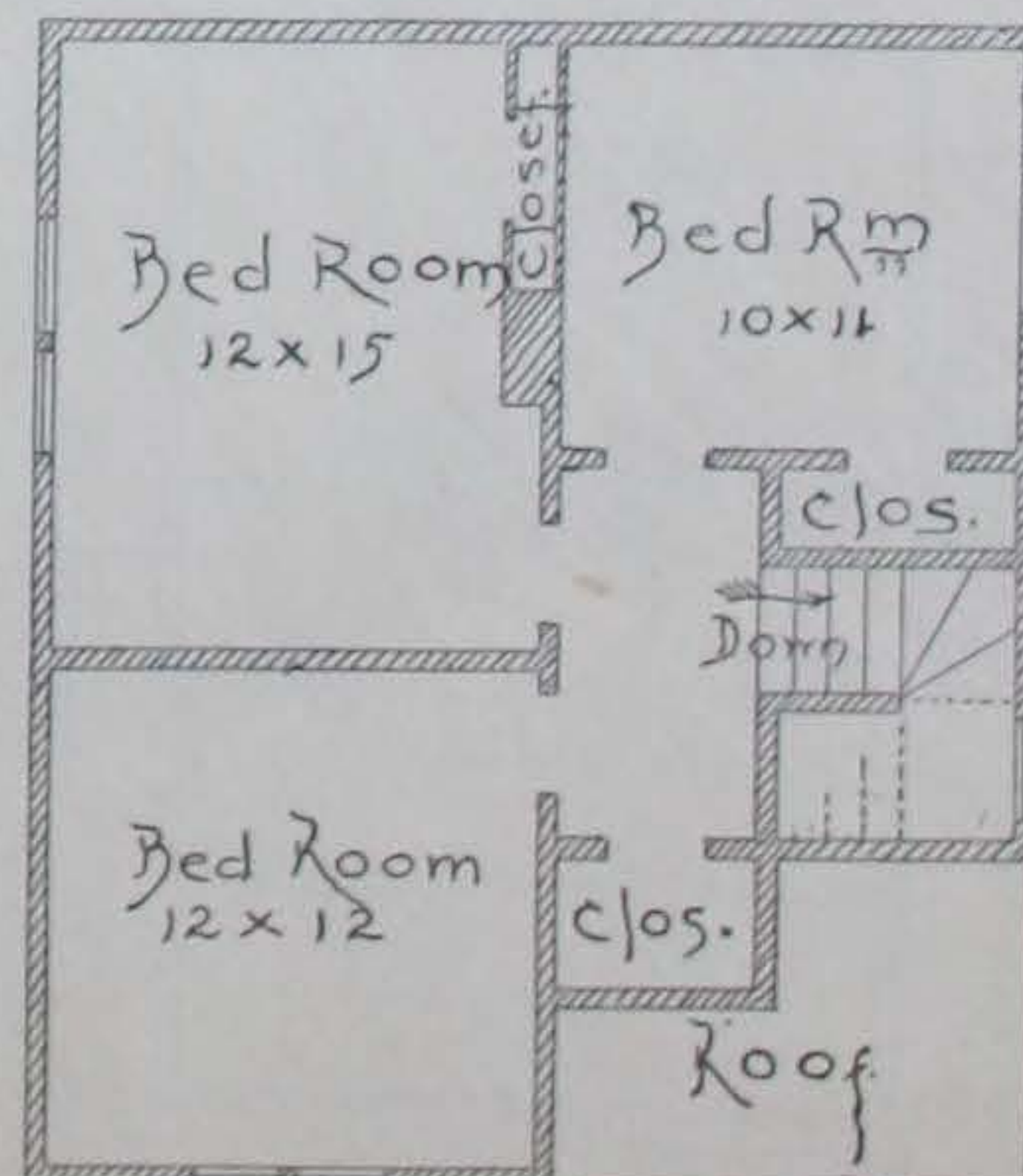
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—The exterior in the same style as Number 252.

No cellar, but one can be provided under the whole house at an expense of \$150.

Ample closet room.

These small, square designs, that appear quite plain as shown by one color in this book, present a very different aspect when painted and stained. Different but harmonious body colors are specified for the first and second stories, still another color for the roof, another for the trim, another for the sash, doors and blinds. It costs no more to have a variety of colors, and when they are selected with good taste and applied properly the effect is very pleasing.



SECOND FLOOR. NO. 254



DESIGN No. 255. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 255

SIZE OF STRUCTURE: Front, 21 ft., 6 in., not including the staircase annex. Side, 36 ft., 6 in., not including veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft., 4 in.

MATERIALS: Foundation, brick and stone; First Story, clapboards; Second Story, clapboards and shingles; Gables, shingles; Roof, shingles.

COST: \$1,600, complete.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—Cellar under the main house.

Two rooms can be finished off in the attic, to which a stairway is provided.

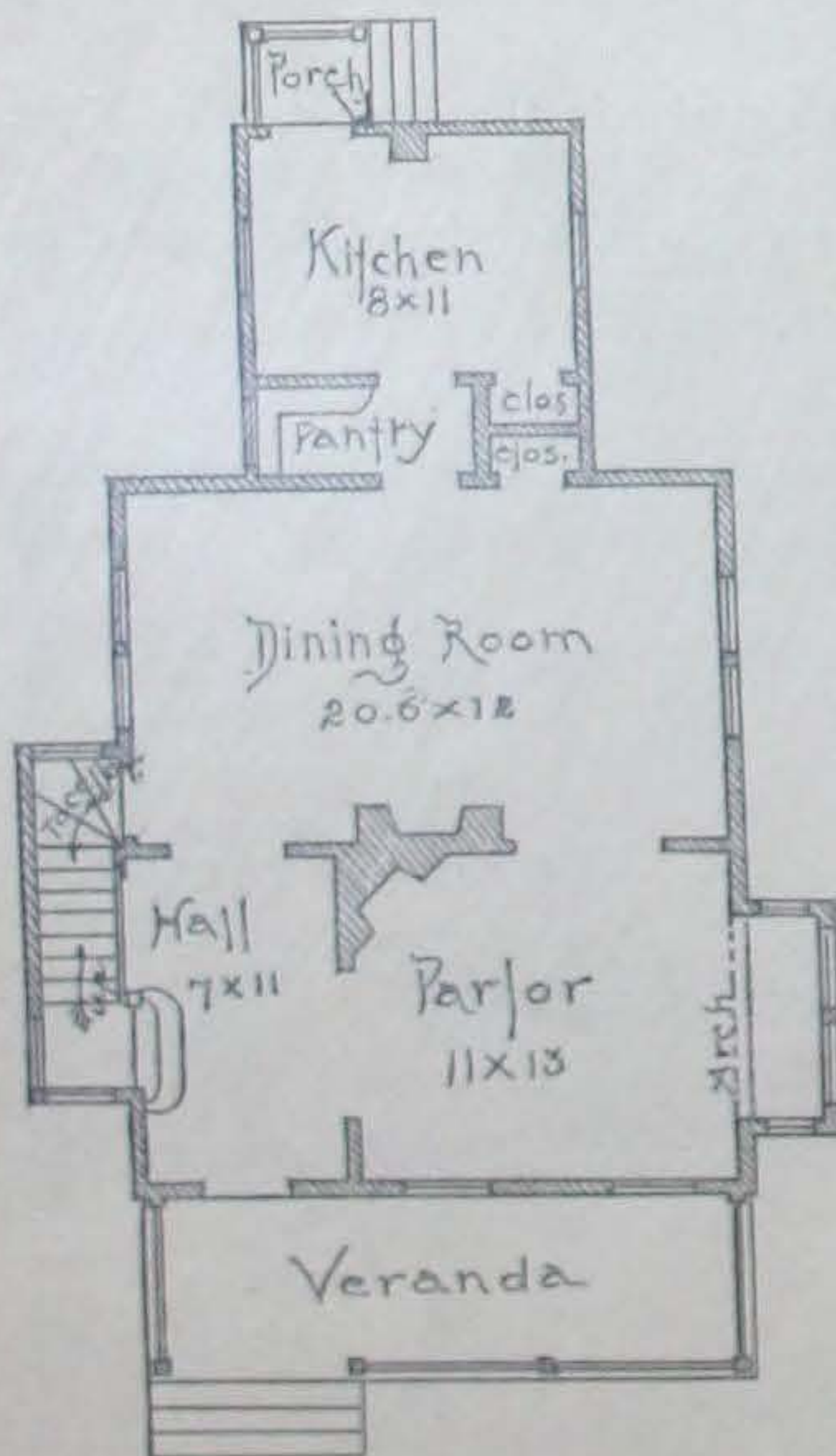
One large central chimney warms the whole house.

A very large dining-room and large openings between all rooms of the first story.

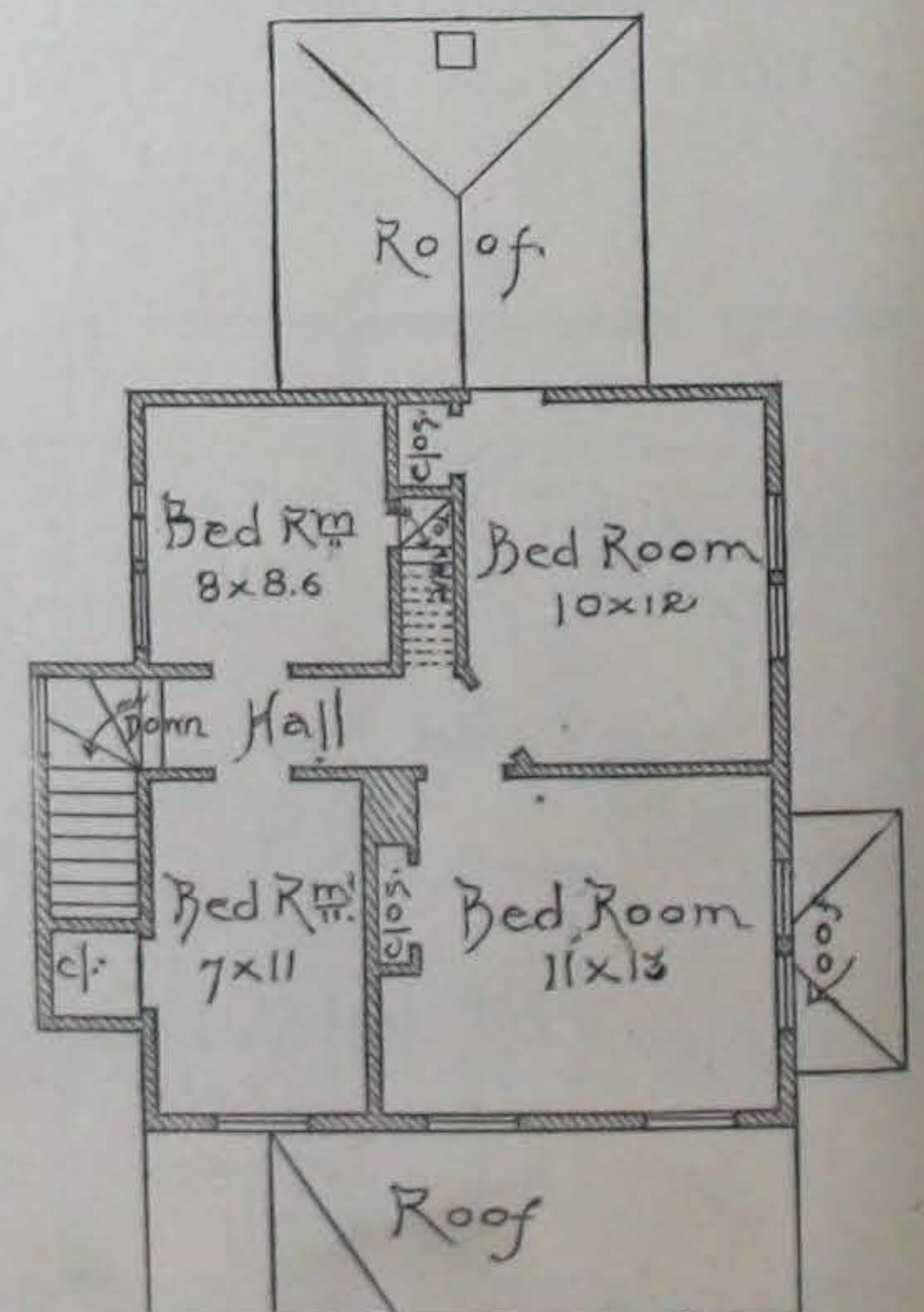
Side annex for the stairway on one side and a bay-window on the other. Large veranda.

Presents a beautiful appearance when painted.

Since we "invented" this design, two years ago, we believe that five hundred houses have been built from it. It is deservedly popular, as it provides ample and elegant room for a family of good size, and the cost is so reasonable. The cost stated is right, having been proven over and over again.



FIRST FLOOR. NO. 255



SECOND FLOOR. NO. 255

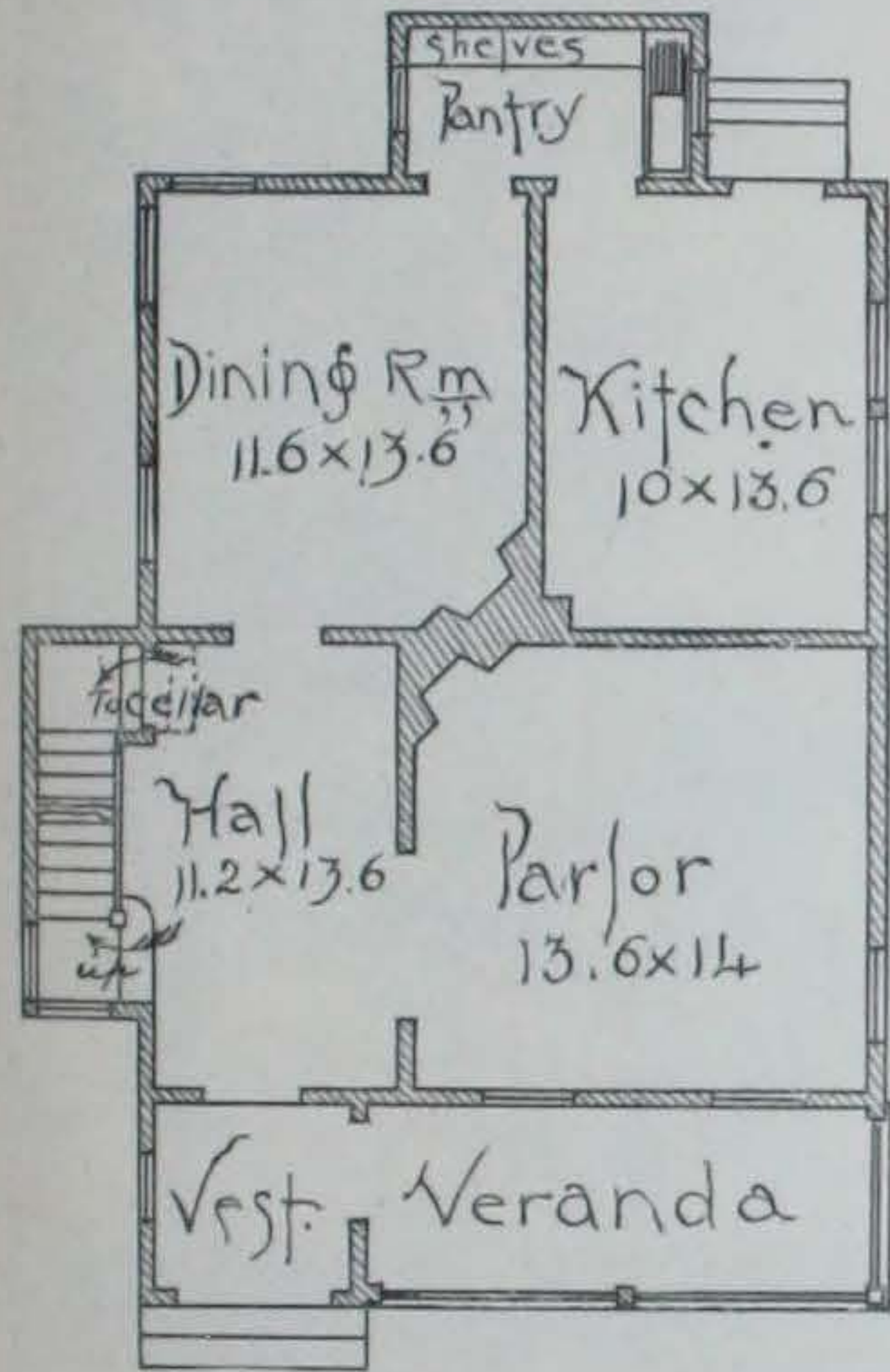
DESCRIPTION OF DESIGN NUMBER 256

SIZE OF STRUCTURE: Front, 23 ft.; including stairway annex, 26 ft., 8 in. Side, 28 ft., 6 in.; including veranda and pantry, 39 ft., 8 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 8 ft., 8 in.; Second Story, 8 ft.; Third Story, 7 ft., 6 in.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, clapboards; Gables, panelled and half timbered; Roof, shingles.



FIRST FLOOR. NO. 256

COST: \$1,600, complete.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

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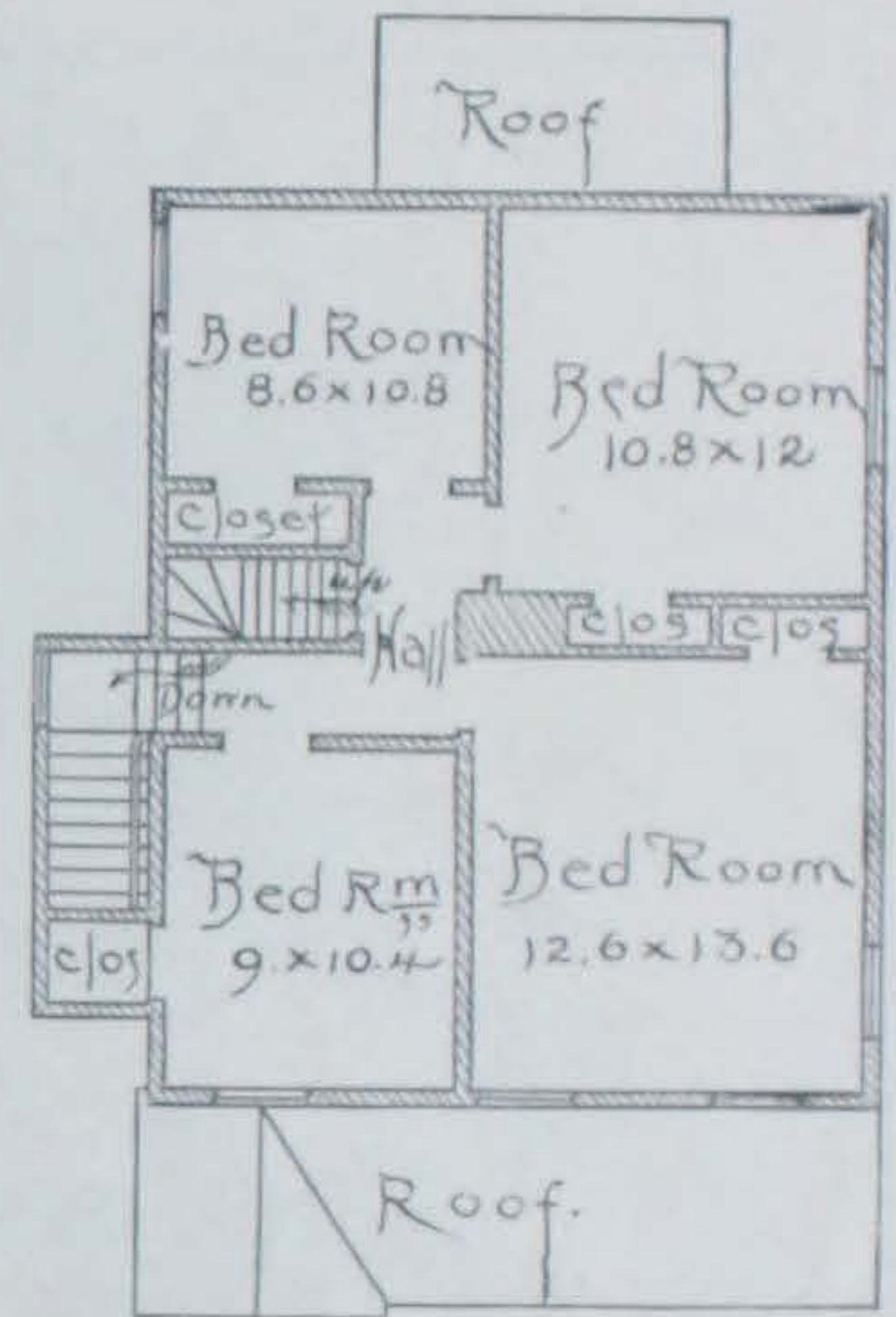
Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

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SPECIAL FEATURES.—The exterior in the same style as the preceding, Number 255. The plans are much the same; the bay-window is omitted, and the kitchen is kept in the main structure, but solidly shut off from the other parts of the house, communicating with a convenient pantry.

A vestibule on the veranda keeps out the cold.

Cellar under the whole house. Two rooms in the attic.



SECOND FLOOR. NO. 256

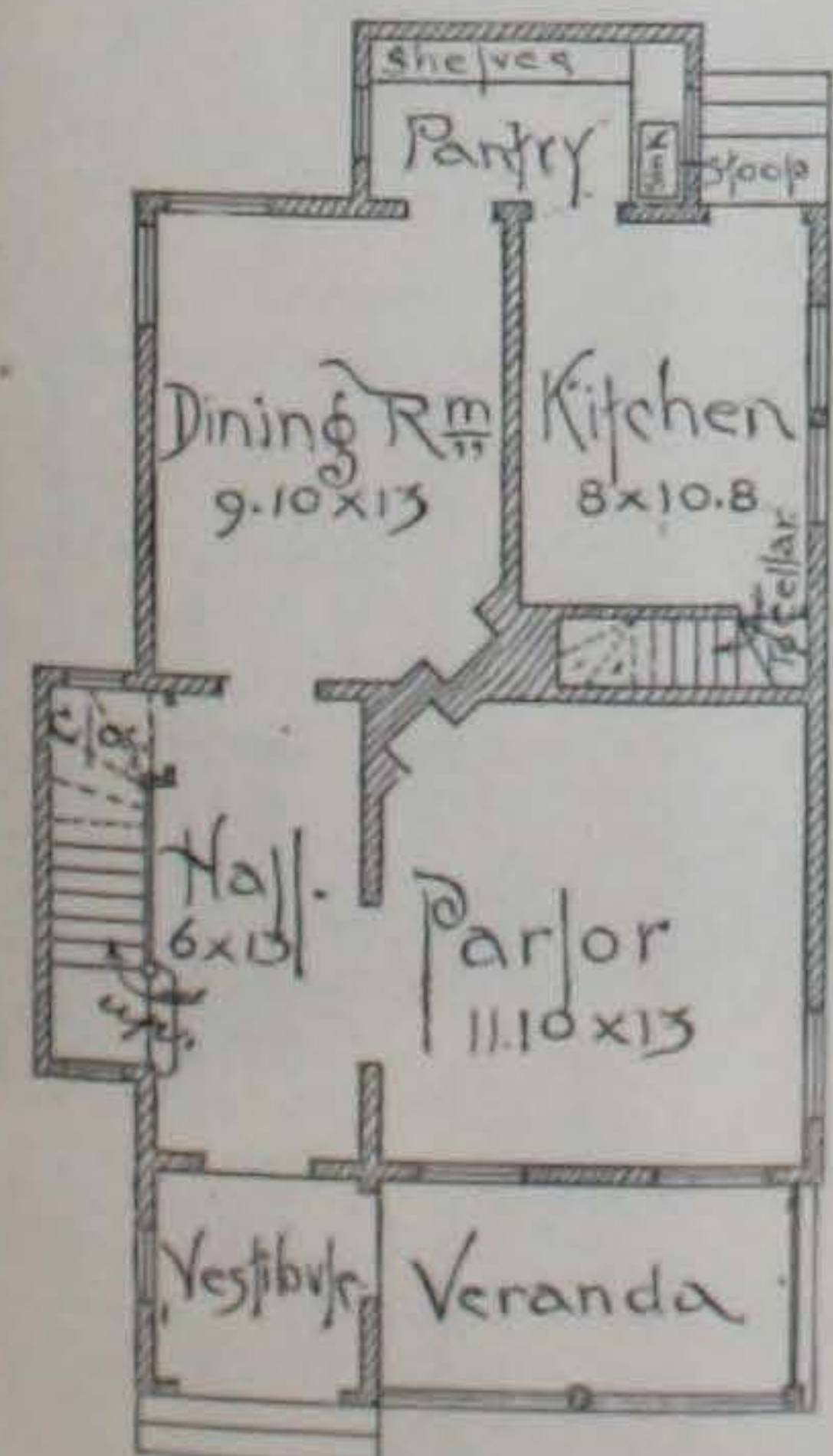
DESCRIPTION OF DESIGN NUMBER 257

SIZE OF STRUCTURE: Front, 19 ft., 4 in.; including stair annex, 22 ft., 4 in. Side, 27 ft., 6 in.; including veranda and pantry, 38 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft.; Third Story, 7 ft., 6 in.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Gables, panelled and half timbered; Roof, shingles.



FIRST FLOOR. NO. 257

COST: \$1,450, complete.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

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Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

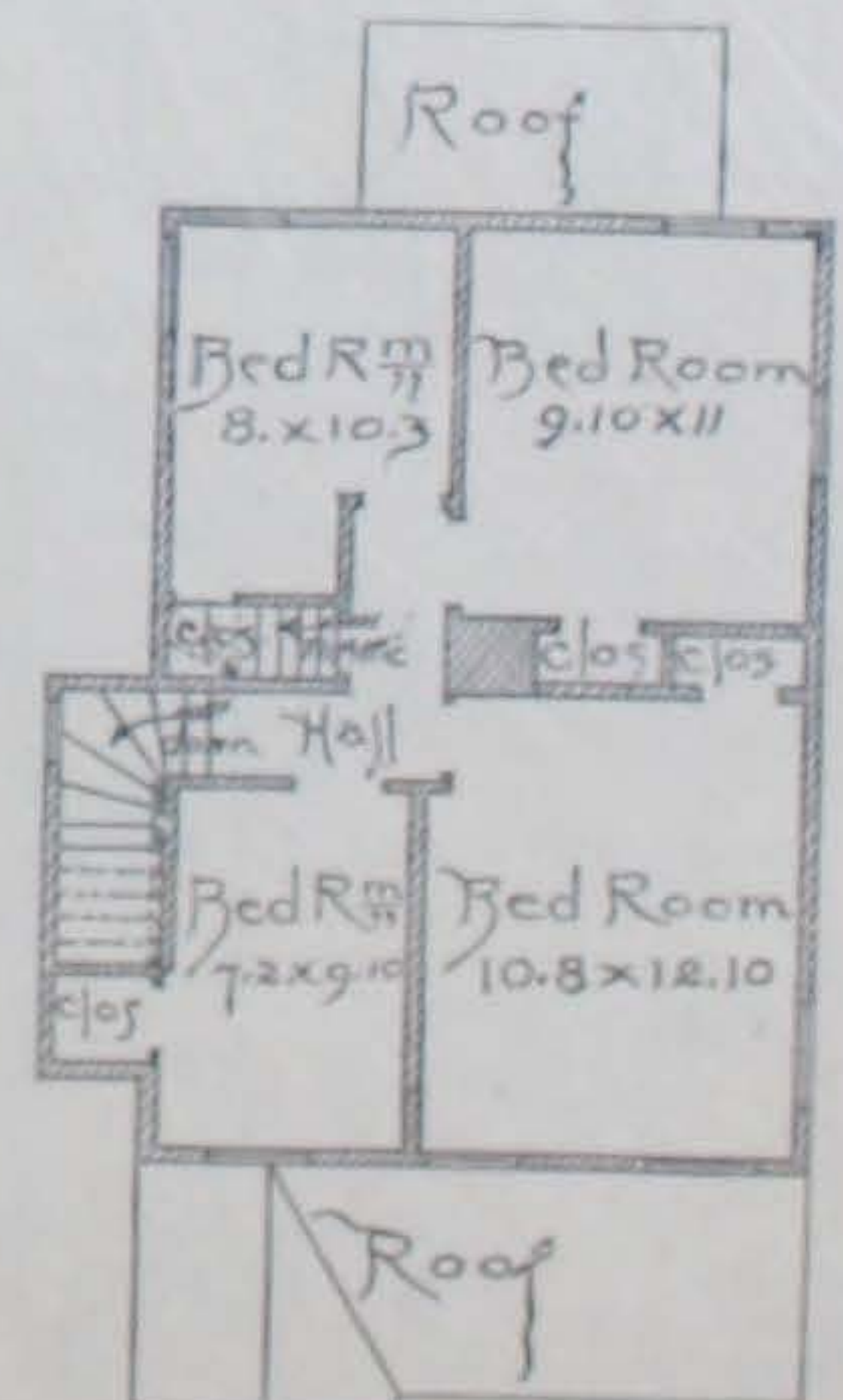
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Another design, with the same exterior appearance as Number 255. A kitchen extension like Number 255 would cost \$150 additional.

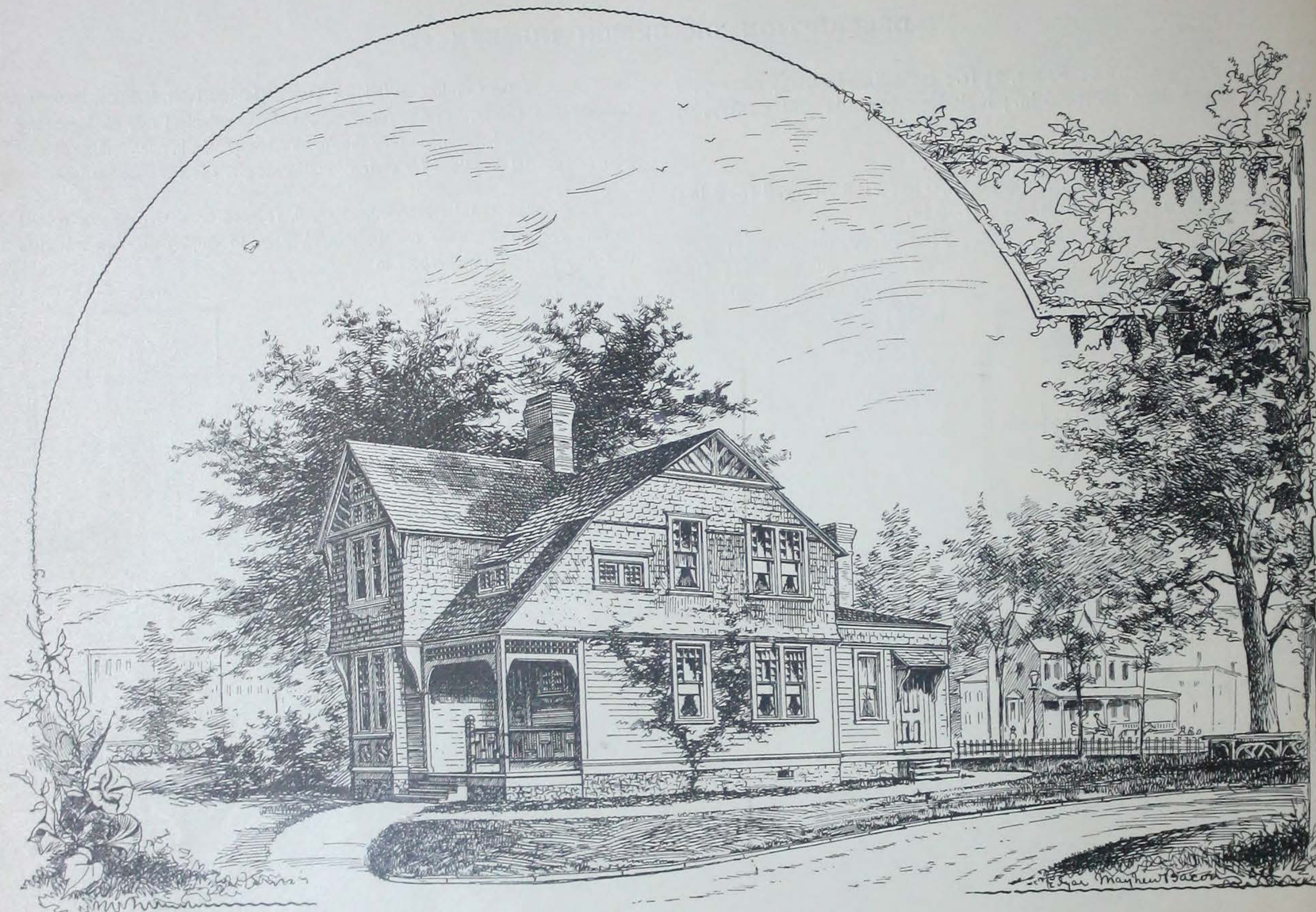
Cellar under the whole house. Two rooms in the attic.

The special feature of this design is that it can be built on a narrow lot, still leaving space for an alley-way to the rear.

The arrangement of rooms could not be more compactly designed. The effect of the recessed staircase with a square platform is exceedingly pretty. Stained glass is used in the small window on the stair-landing.



SECOND FLOOR. NO. 257



DESIGN No. 258. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 258

SIZE OF STRUCTURE: Front, 24 ft., 6 in. Side, 47 ft., 6 in.
 SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft.; Second Story, 8 ft., 6 in.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Gables, half timber and shingles; Roof, shingles, —kitchen roof, tin.

COST: \$2,200, complete.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

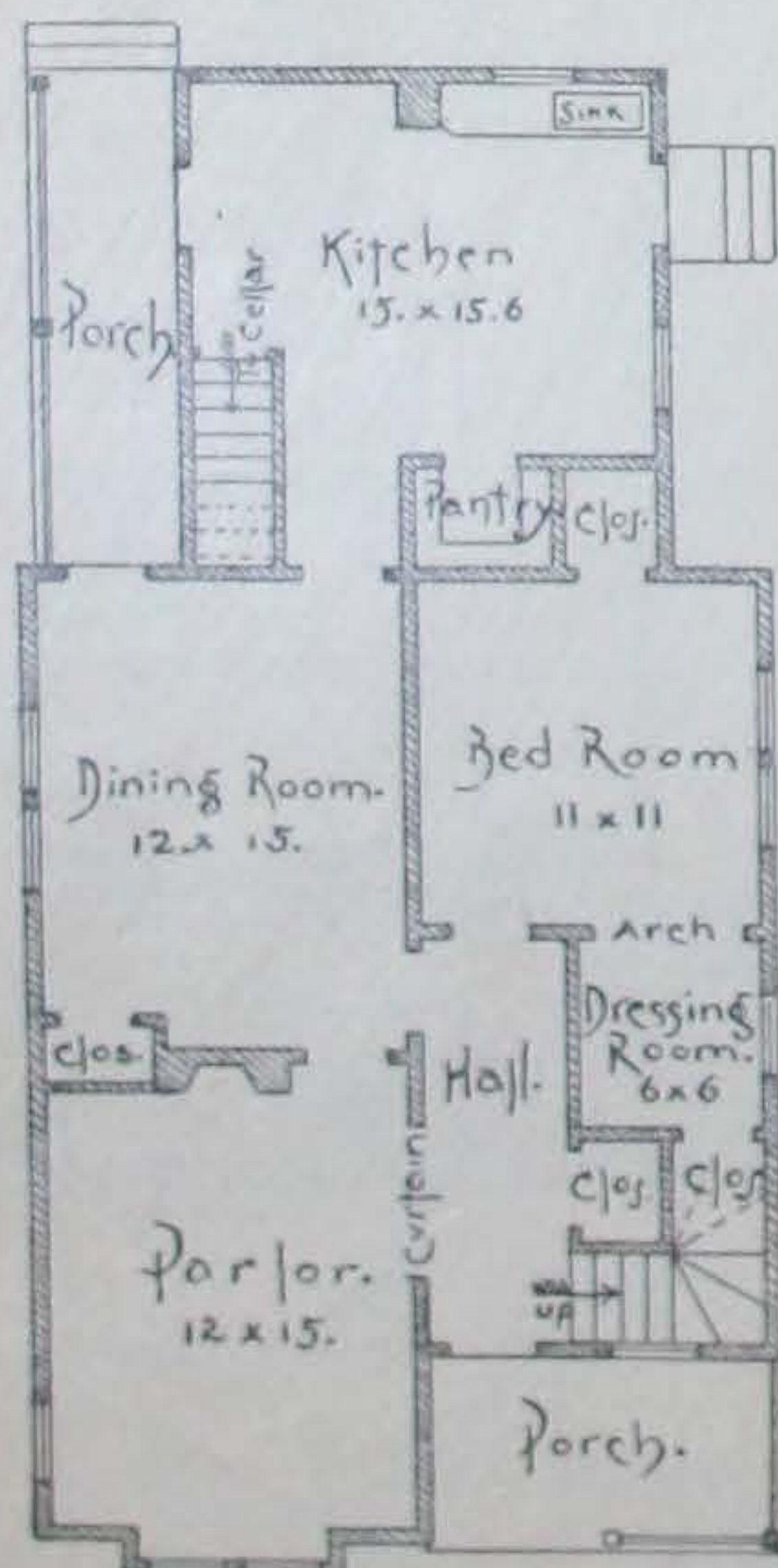
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES. — Cellar under dining-room only. Attic space good only for light stores, trunks, &c., and is reached by portable steps.

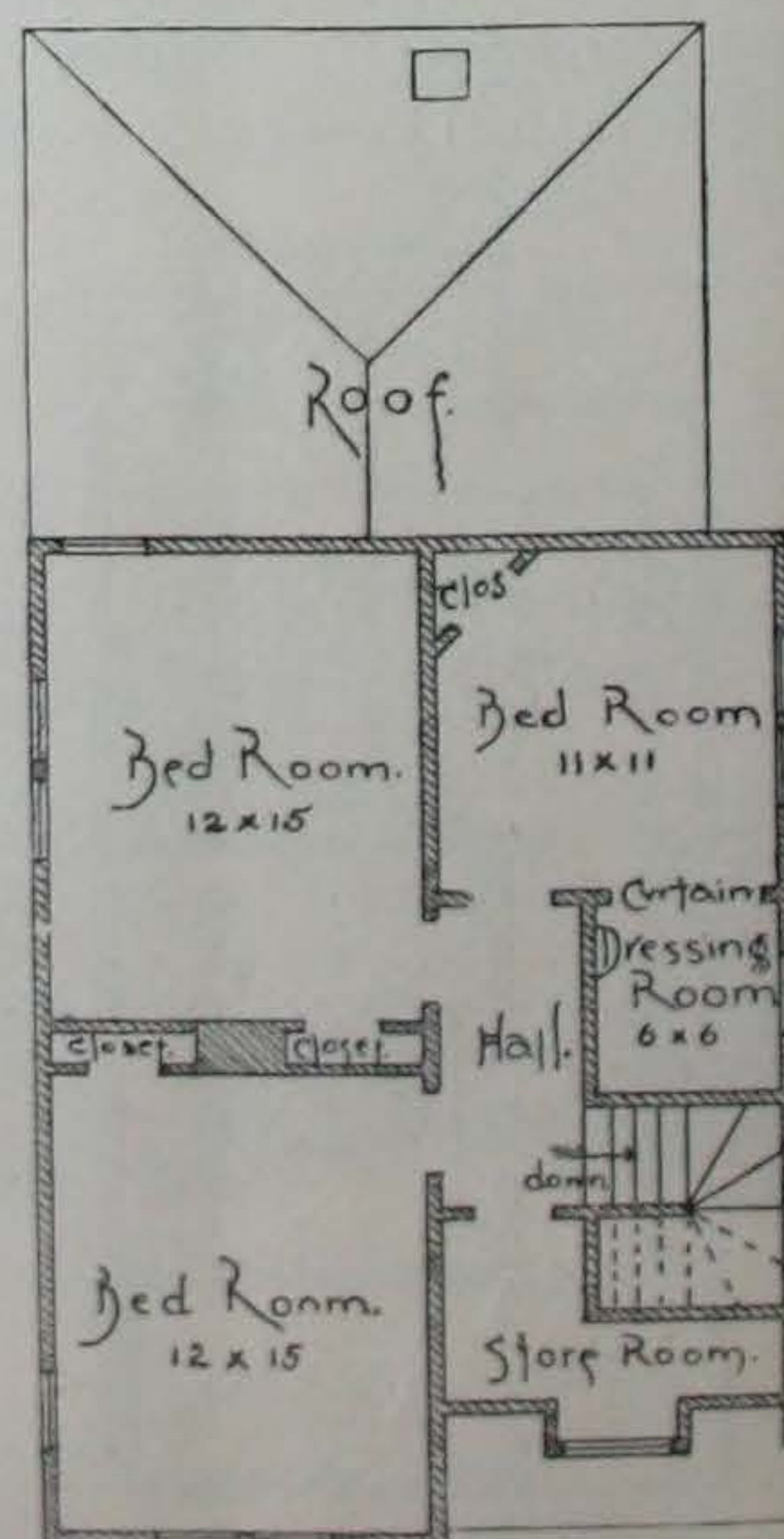
The ample closet room and the dressing-rooms are good features. Only those who have enjoyed the luxury of a dressing-room where all the paraphernalia of the toilet can have a place and be kept in place, can appreciate its convenience.

There is a pretty and quaint style about the exterior of this design that looks better in execution than in the drawing.

In considering the appearance of a house, as built, it should be borne in mind that the colors play an important part. Our perspective views, necessarily printed in one color, do not do justice to any of the designs, and in special cases like this fall far short of showing the true appearance of the structure.



FIRST FLOOR. NO. 258



SECOND FLOOR. NO. 258

DESCRIPTION OF DESIGN NUMBER 259

SIZE OF STRUCTURE: Front, 27 ft., 6 in. Side, 33 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 8 in.; First Story, 9 ft.; Second Story, 8 ft.; Third Story, 7 ft., 6 in.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$2,000, complete, except kitchen range.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

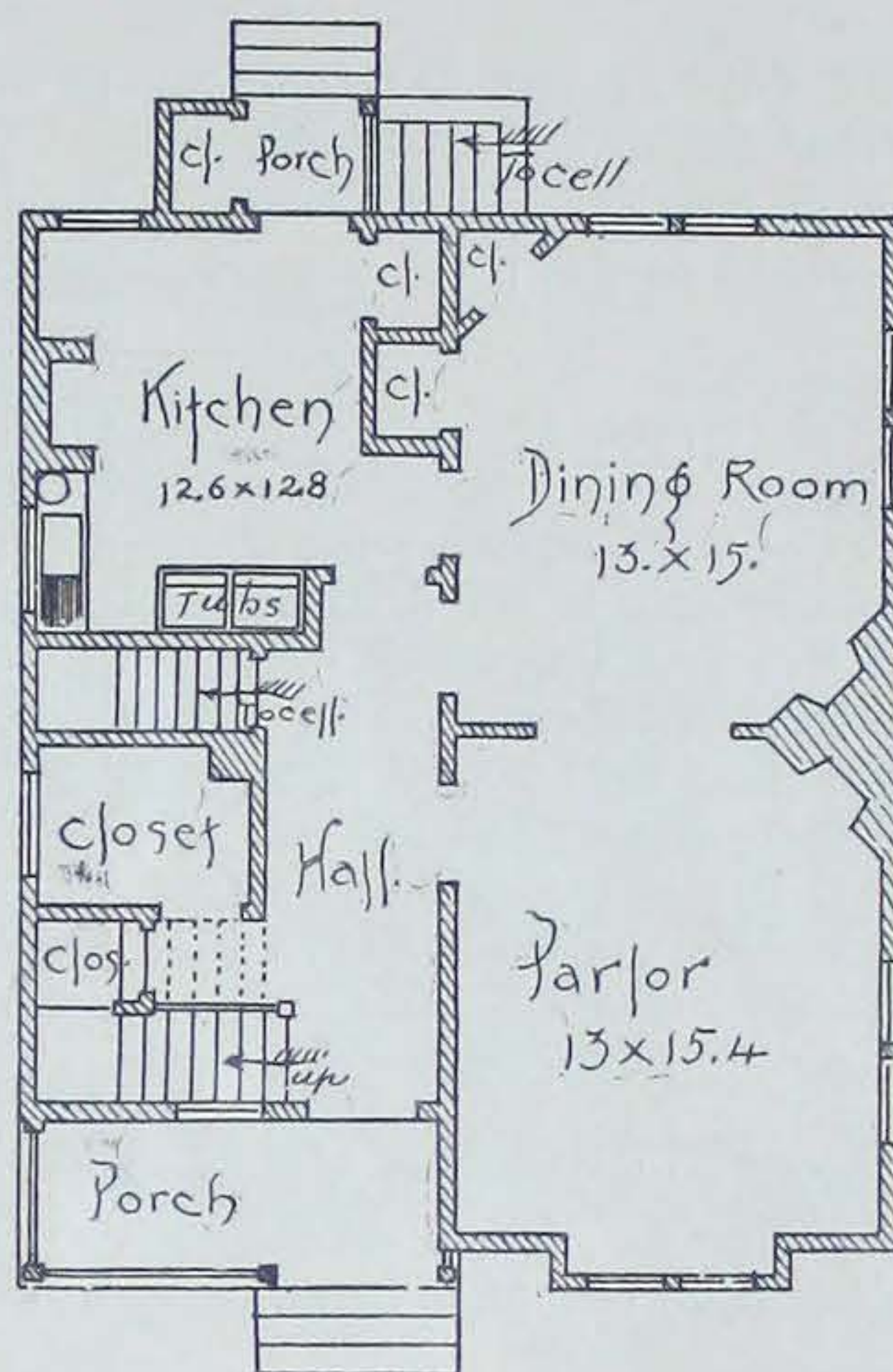
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—The exterior is similar to but more compact in appearance than the preceding design, Number 258.

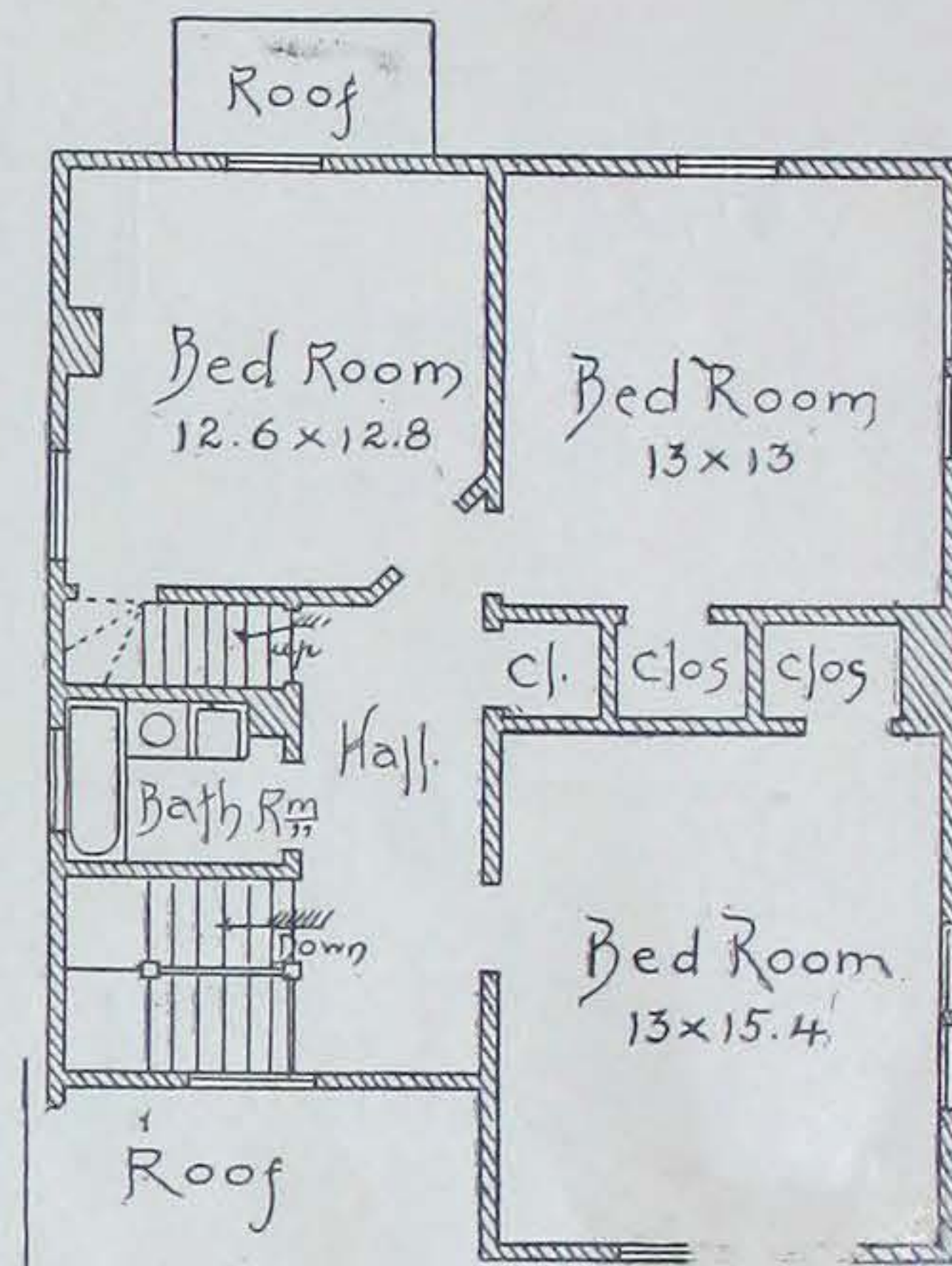
Cellar under half of the house, with good light and both inside and outside entrances.

Two good rooms in the attic.

Folding-doors between parlor and dining-room. A curtain could be substituted with some advantage in the matter of cost and appearance. Curtains between rooms are not patronized to the extent that their usefulness, economy and beauty warrant.



FIRST FLOOR. NO. 259



SECOND FLOOR. NO. 259

DESCRIPTION OF DESIGN NUMBER 260

SIZE OF STRUCTURE: Front, 29 ft. Side, 41 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft.; Second Story, 8 ft.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$2,700, complete, except kitchen range.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

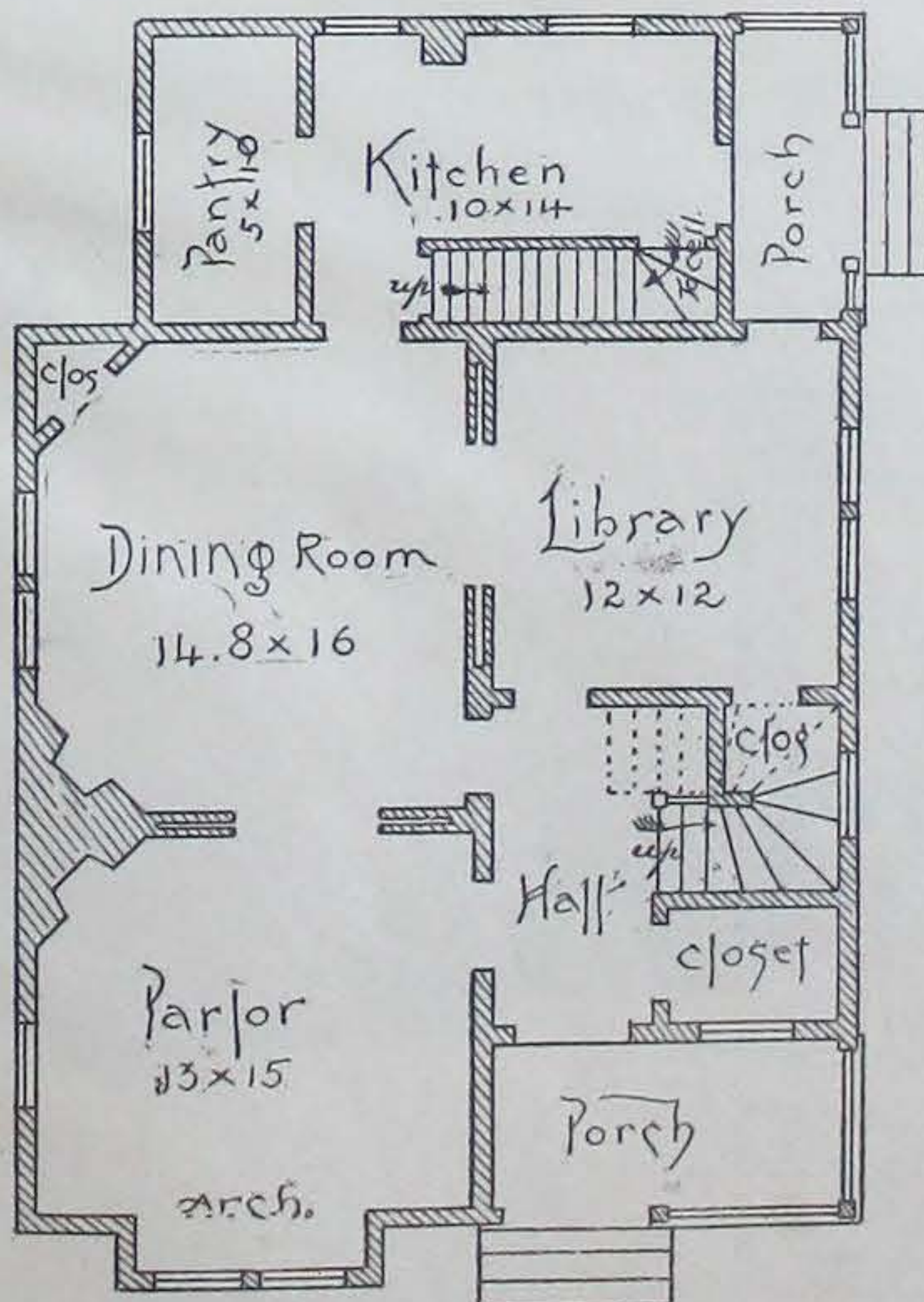
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Another design, with exterior similar to Number 258, but more compact in appearance.

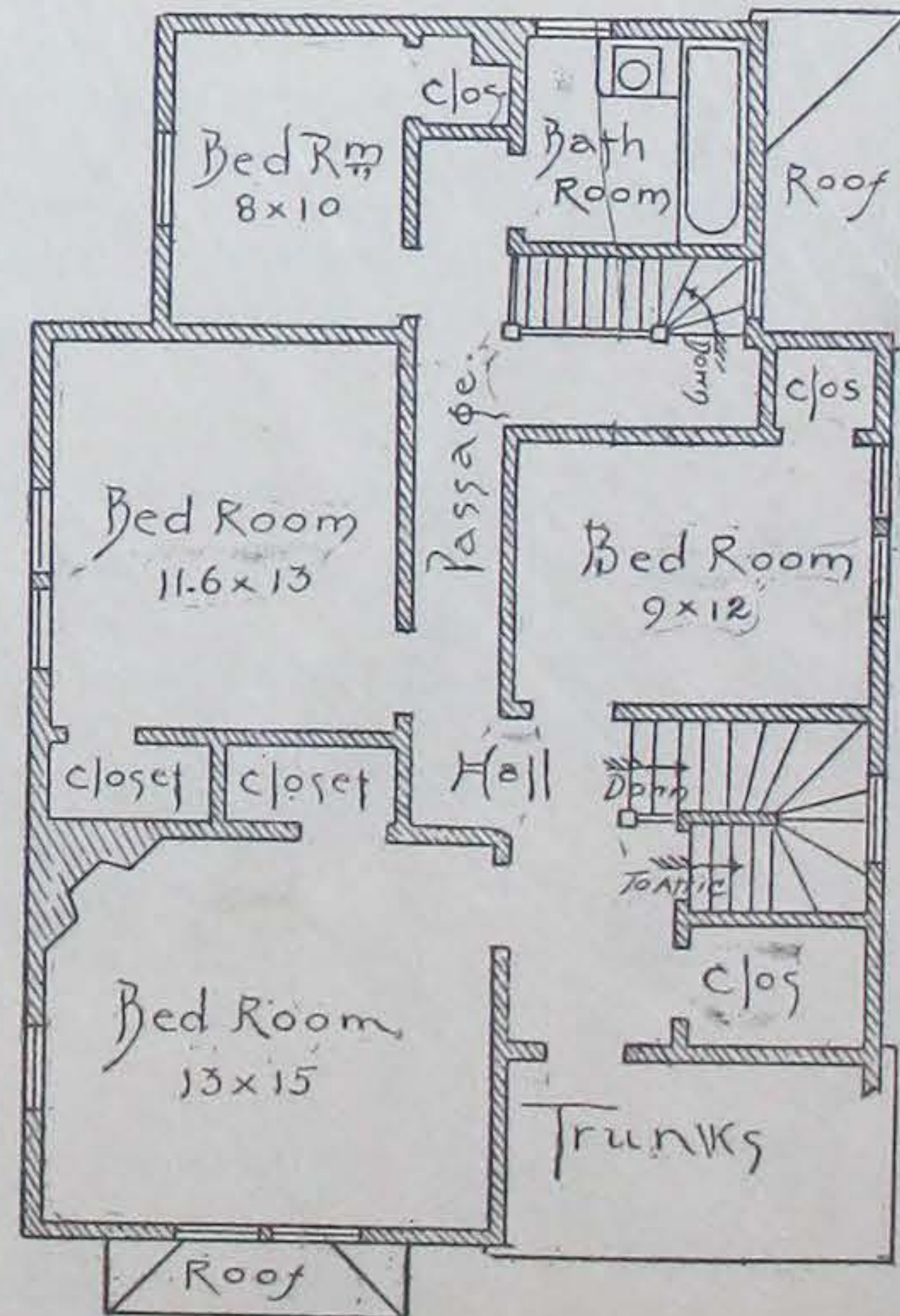
The addition of kitchen extension a story and a half high adds considerably more room, and does not greatly increase cost.

The sliding-door openings give spaciousness to the first floor.

Cellar under the whole house. Back staircase from kitchen to second story.



FIRST FLOOR. NO. 260



SECOND FLOOR. NO. 260

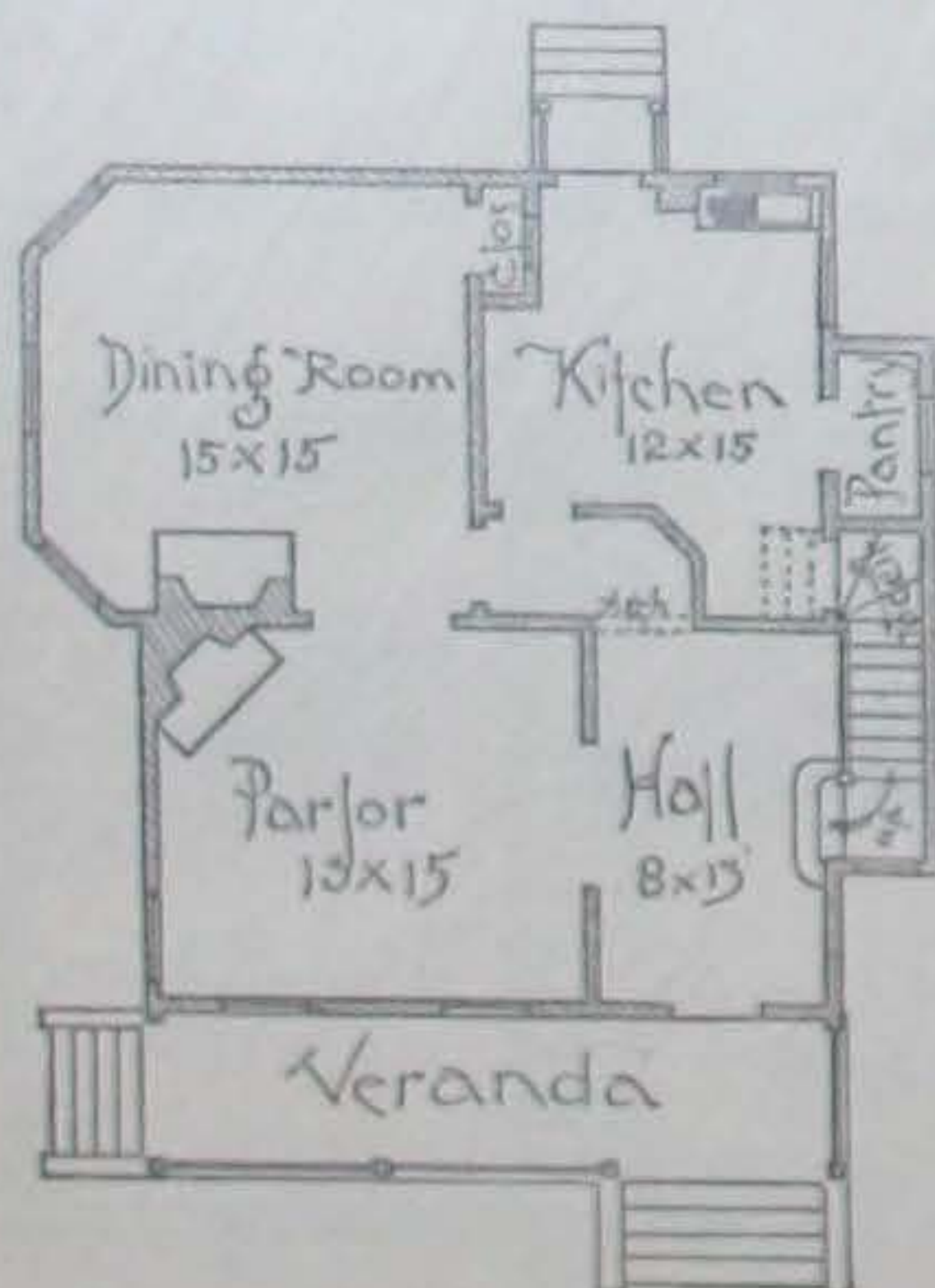


DESIGN No. 264. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 264

SIZE OF STRUCTURE: Front, 24 ft., 6 in.; including stair annex and dining-room bay, 32 ft. Side, 29 ft., 6 in., not including front veranda.

SIZE OF ROOMS: See floor plans.



FIRST FLOOR. NO. 264

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft., 3 in.; Third Story, 7 ft., 6 in.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Gables, half timbered and shingled; Roof, shingled.

COST: \$2,000, complete, except mantels and kitchen range.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most

other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

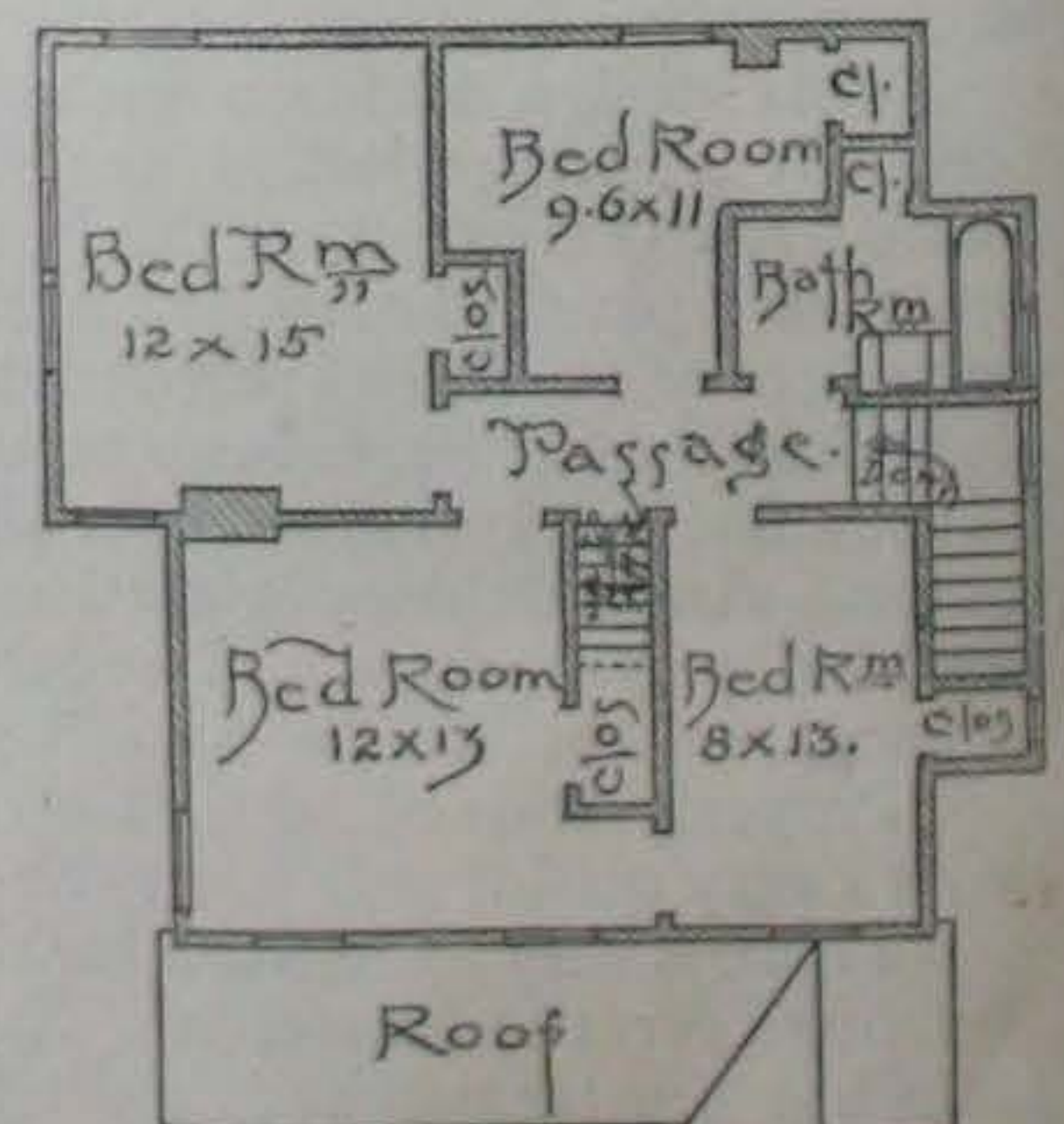
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Cellar under the whole house. Two large and well-lighted rooms in the attic.

First story hall connects directly with the dining-room, the parlor and the kitchen.

Stairway to the cellar out of the kitchen and under the main stairway.

Stained-glass windows light the main hall; stained glass in upper part of the front door also.



SECOND FLOOR. NO. 264



DESIGN No. 265. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 265

SIZE OF STRUCTURE: Front, 25 ft.; with staircase annexed, 28 ft., 4 in. Side, 31 ft., and kitchen extension, 16 ft. Total depth, 47 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 8 ft., 6 in.; Second Story, 8 ft.; Third Story, 7 ft., 8 in.

MATERIALS: Foundation, stone; First Story, brick; Second Story, brick; Gables, shingles; Roof, shingles.

COST: \$2,800, complete, except mantels and kitchen range.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies

cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

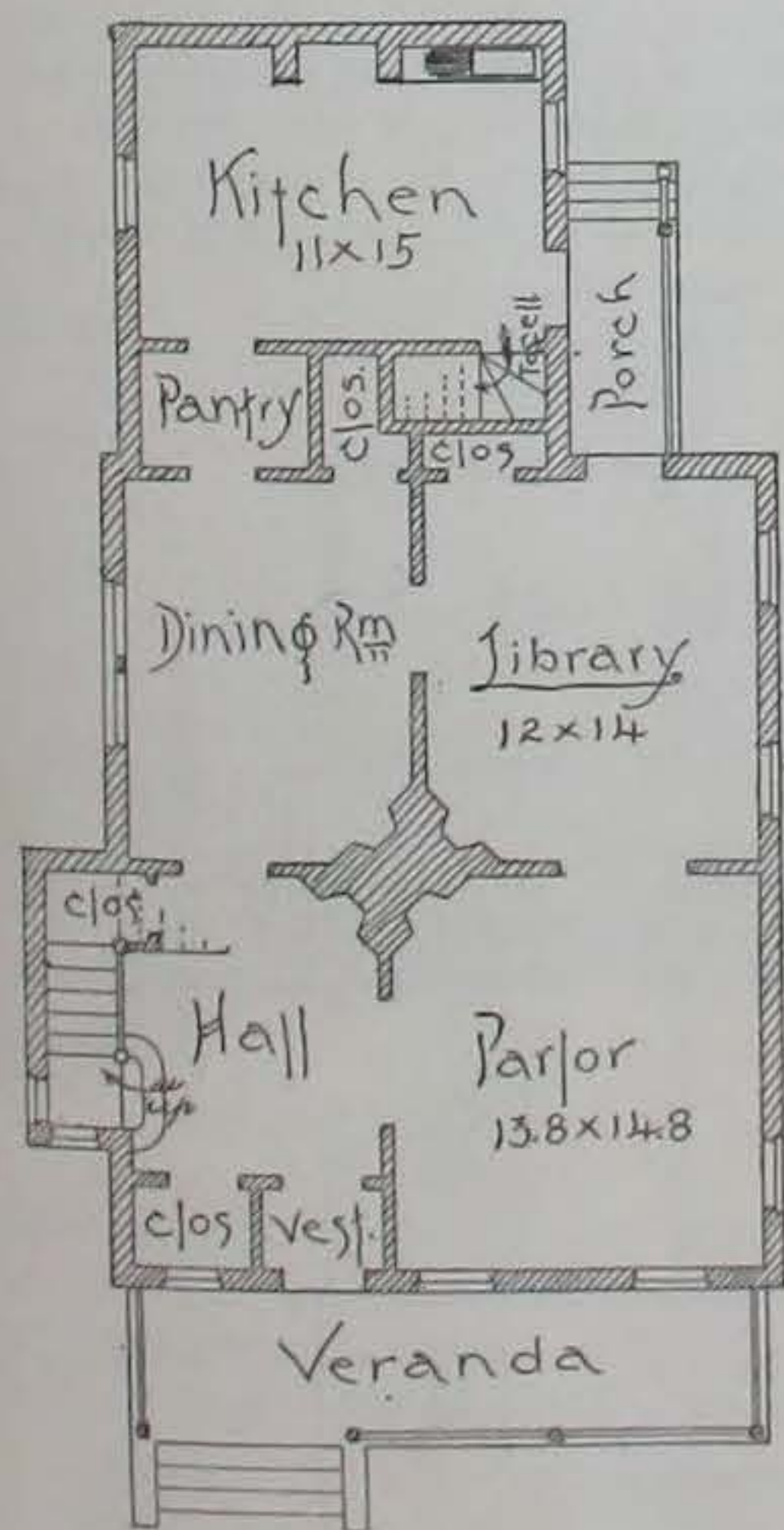
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—This is a modification in brick of the favorite design Number 255.

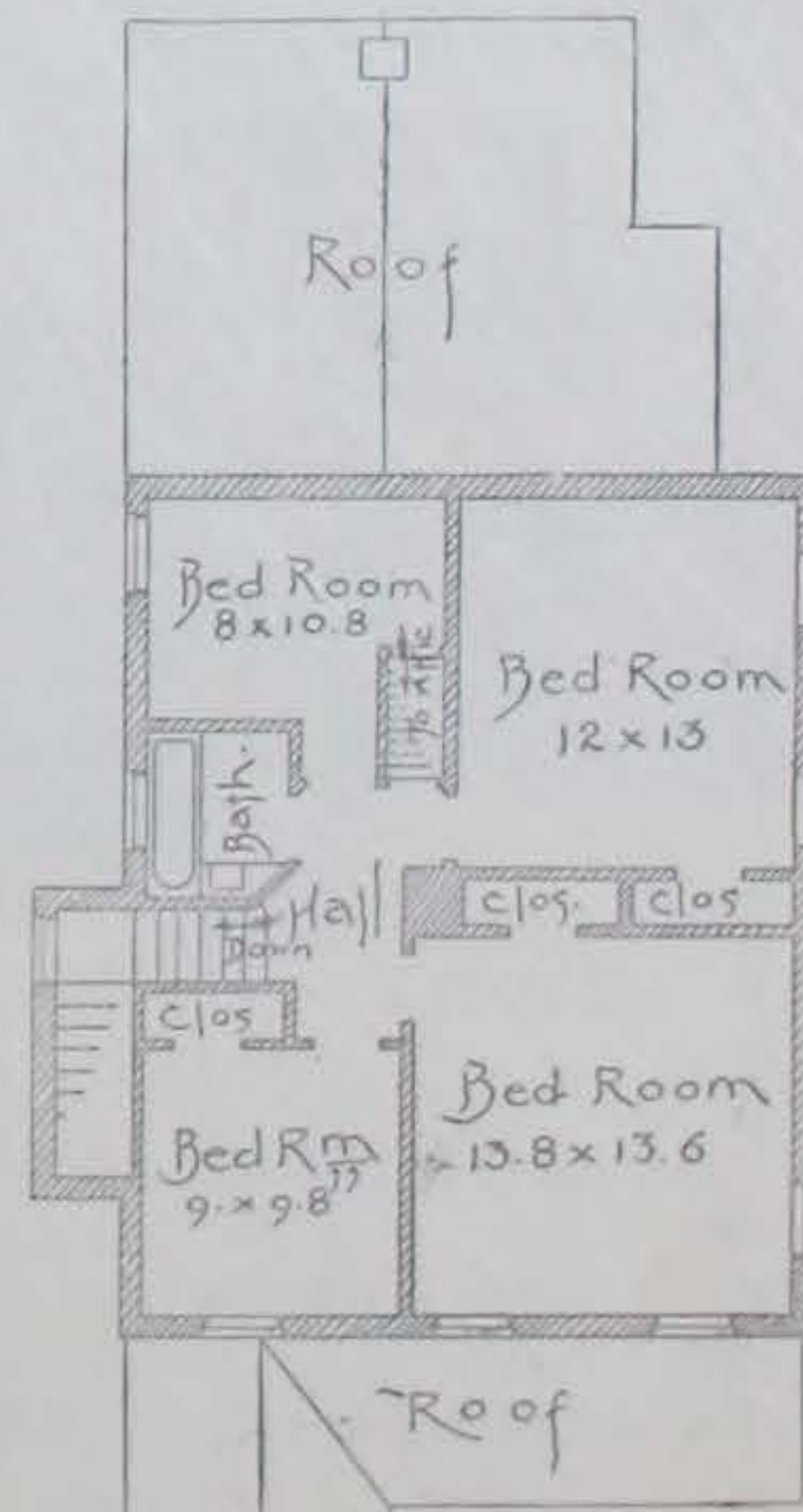
Cellar under the kitchen extension and half of the main house. Three good rooms in the attic beside storage space.

A fireplace in each of the four rooms in the first story.

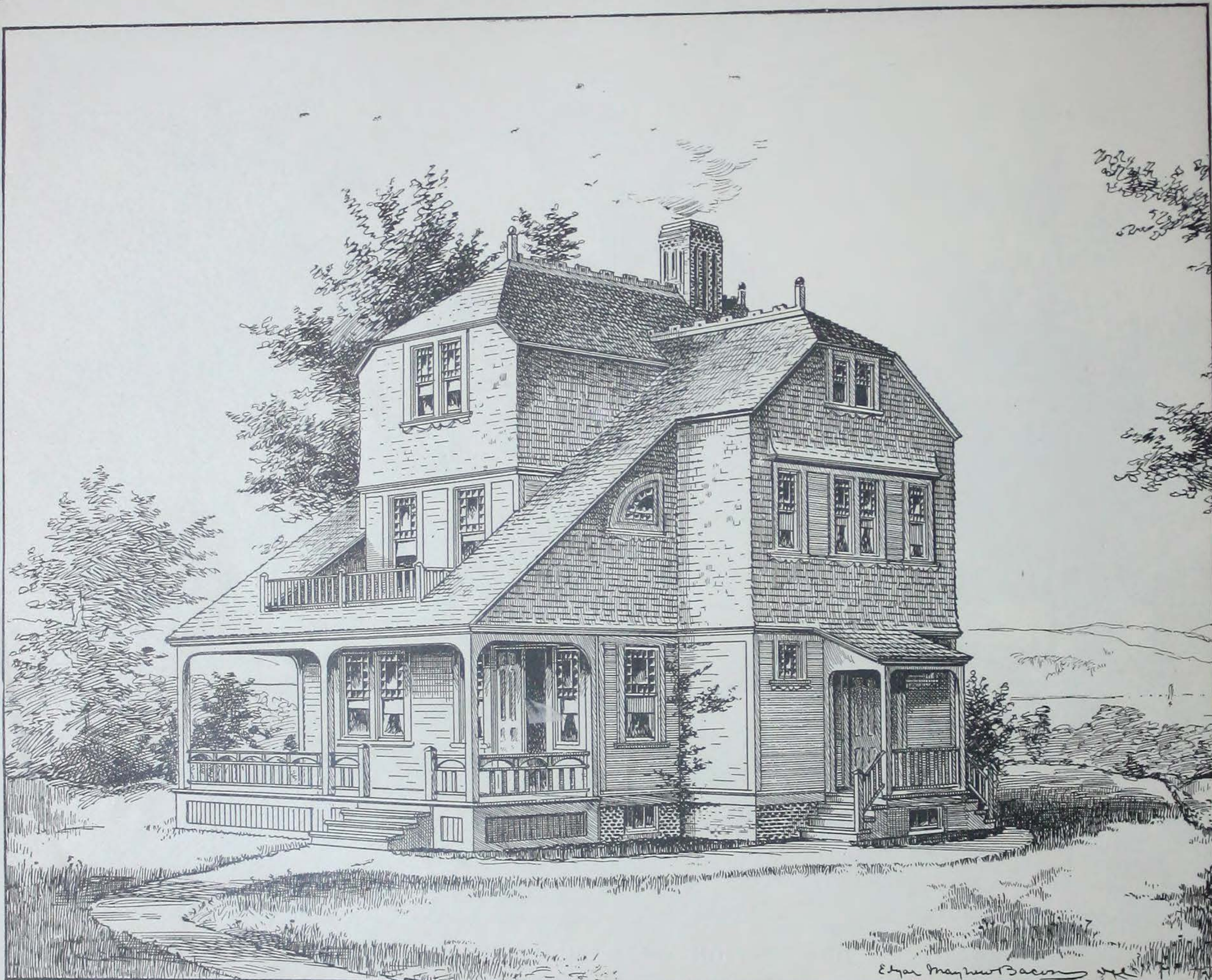
Heated by stoves or grates, but we will indicate location for furnace and registers if desired.



FIRST FLOOR. NO. 265



SECOND FLOOR. NO. 265



DESIGN No. 266. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 266

SIZE OF STRUCTURE: Front, 27 ft., 6 in.; including side porch, 33 ft. Side, 31 ft., 6 in.; including pantry and veranda, 47 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft., 6 in.; Second Story, 8 ft., 6 in.; Third Story, 7 ft., 6 in.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$2,700, complete.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also

modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

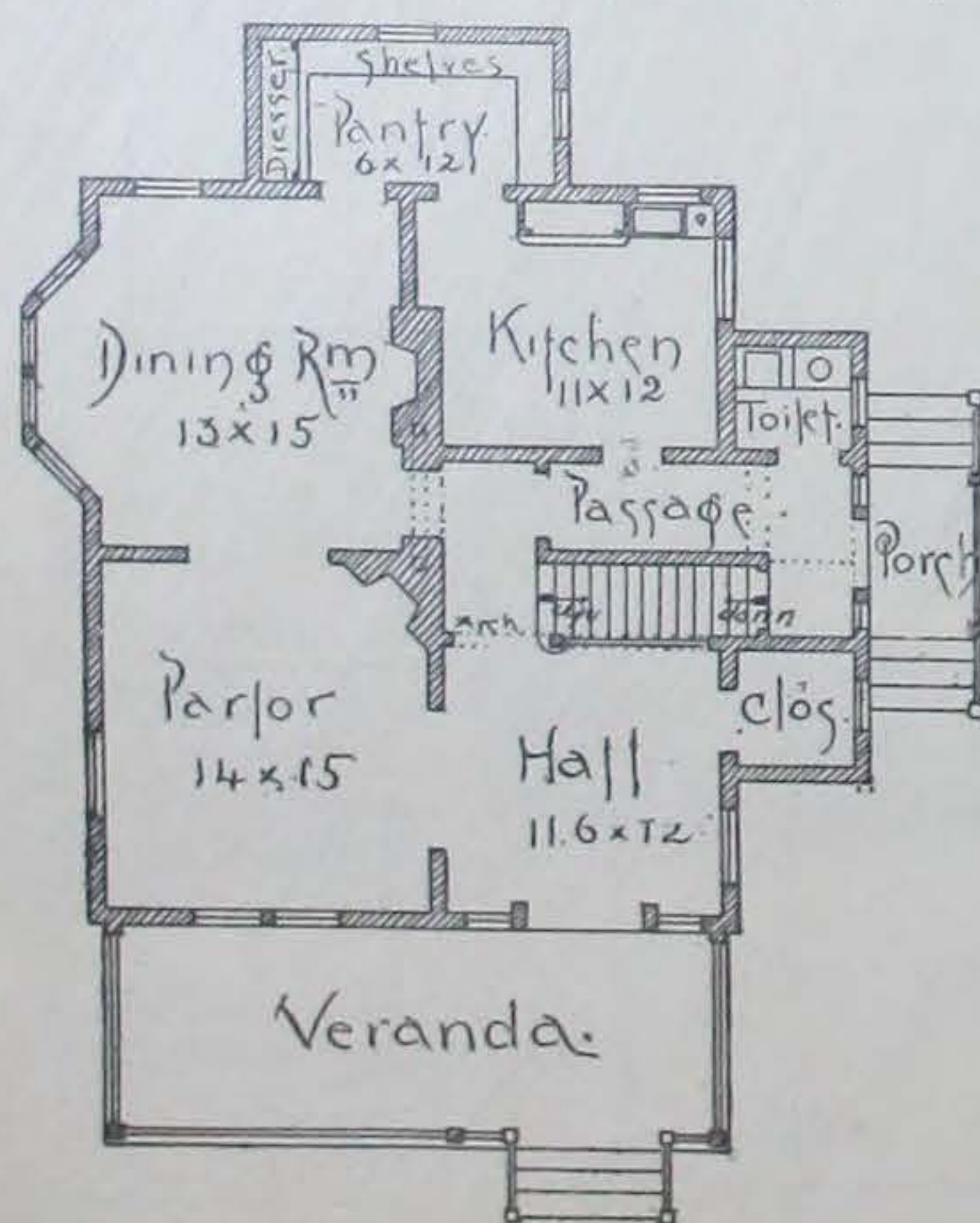
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Cellar under part of house only.

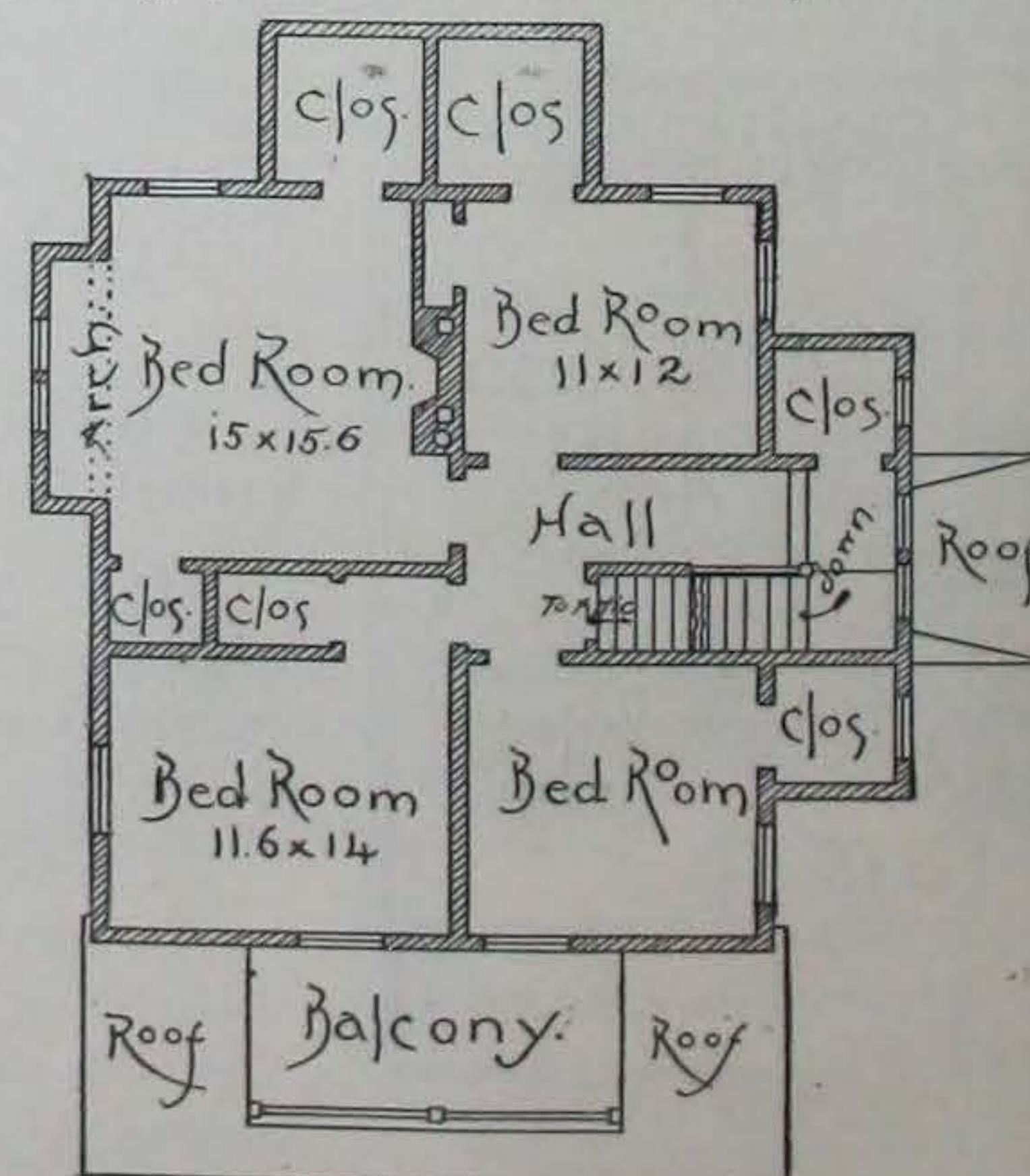
Two good rooms and plenty of store-room in the attic.

Toilet room on first floor, convenient to the stairway and to the side entrance.

A good feature is the isolation of kitchen from the "living" part of house. The staircase, partly screened from the hall by an arch, is very pretty and attractive in execution.



FIRST FLOOR. NO. 266



SECOND FLOOR. NO. 266



DESIGN No. 267. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 267

COST: \$3,000, complete.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

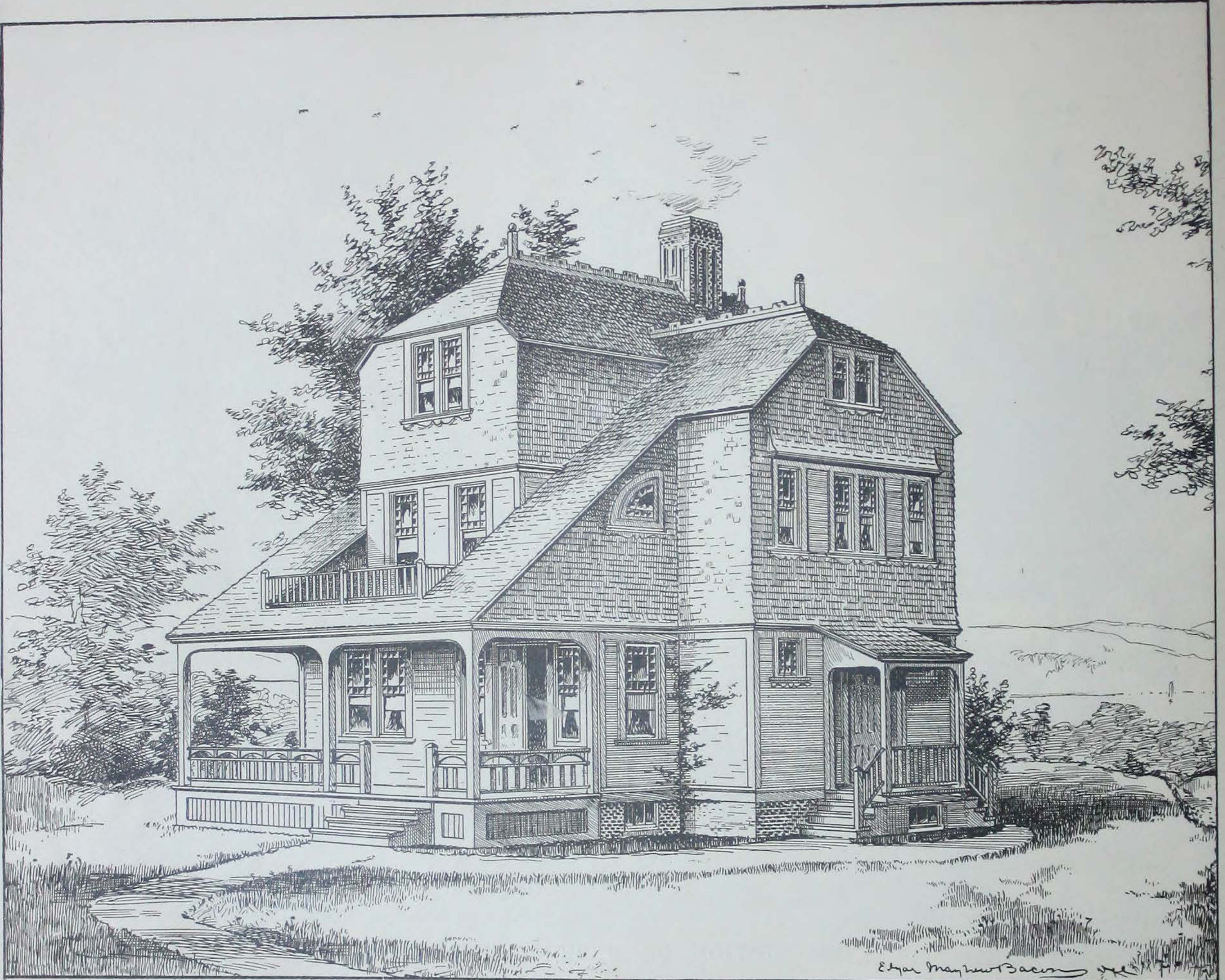
This is simply a modified exterior for the plans of Number 266. The balcony is covered and the front room in the attic enlarged, which is here large enough for a good billiard-room.

HINTS ON HEATING

LIGHT a fire in the sitting-room grate or stove and it will immediately commence to consume the air of the room, as well as the fuel: the fire must have a draught. As the air of the room is consumed, every cranny and window crevice, every door, even the little parting joints of the floors, contribute to the supply of air. The air thus contributed is cold, so we see that the lighting of our fire invited an attack from the freezing temperature that we wished to escape. This is quite observable when a fire is first lighted. For a few minutes the temperature is colder than before lighting. After a while the room may be so heated that the incoming cold air is seized and heated by the warm air before it has advanced far from the doors, windows and crevices. Then the room is comfortable—except near the fire, where it is too warm. Let the temperature be lowered a little, however, the cold air will advance; and retire again before a higher temperature. Thus it advances and retreats, but always keeps up a vigorous attack. The draughts and varying temperature cause colds and many disorders.

Take another method: Light a furnace fire in the basement, and send the hot air up to the sitting-room through a pipe. The hot air will immediately fly to the crannies and crevices, and seek to escape. It thus attacks and repels the cold air. The reason is, that there is no combustion going on in the sitting-room, and therefore no draught or consumption of air. The demand for air is in the basement, where it should be supplied to the furnace pure and direct from outside of the house.

These comparative examples, which many have observed for themselves, point very emphatically to the use of basement furnaces for heating. We could give them our unqualified approval (in conjunction with fireplaces to insure ventilation), if it were not for the devitalized air that often comes from overheated metal. We would like to see some manufacturer put into practical shape a clay-heating surface for ordinary furnaces. It has been thoroughly demonstrated that a fire-clay heating surface always gives off a pure and balmy air.



DESIGN No. 266. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 266

SIZE OF STRUCTURE: Front, 27 ft., 6 in.; including side porch, 33 ft. Side, 31 ft., 6 in.; including pantry and veranda, 47 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft., 6 in.; Second Story, 8 ft., 6 in.; Third Story, 7 ft., 6 in.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$2,700, complete.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also

modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

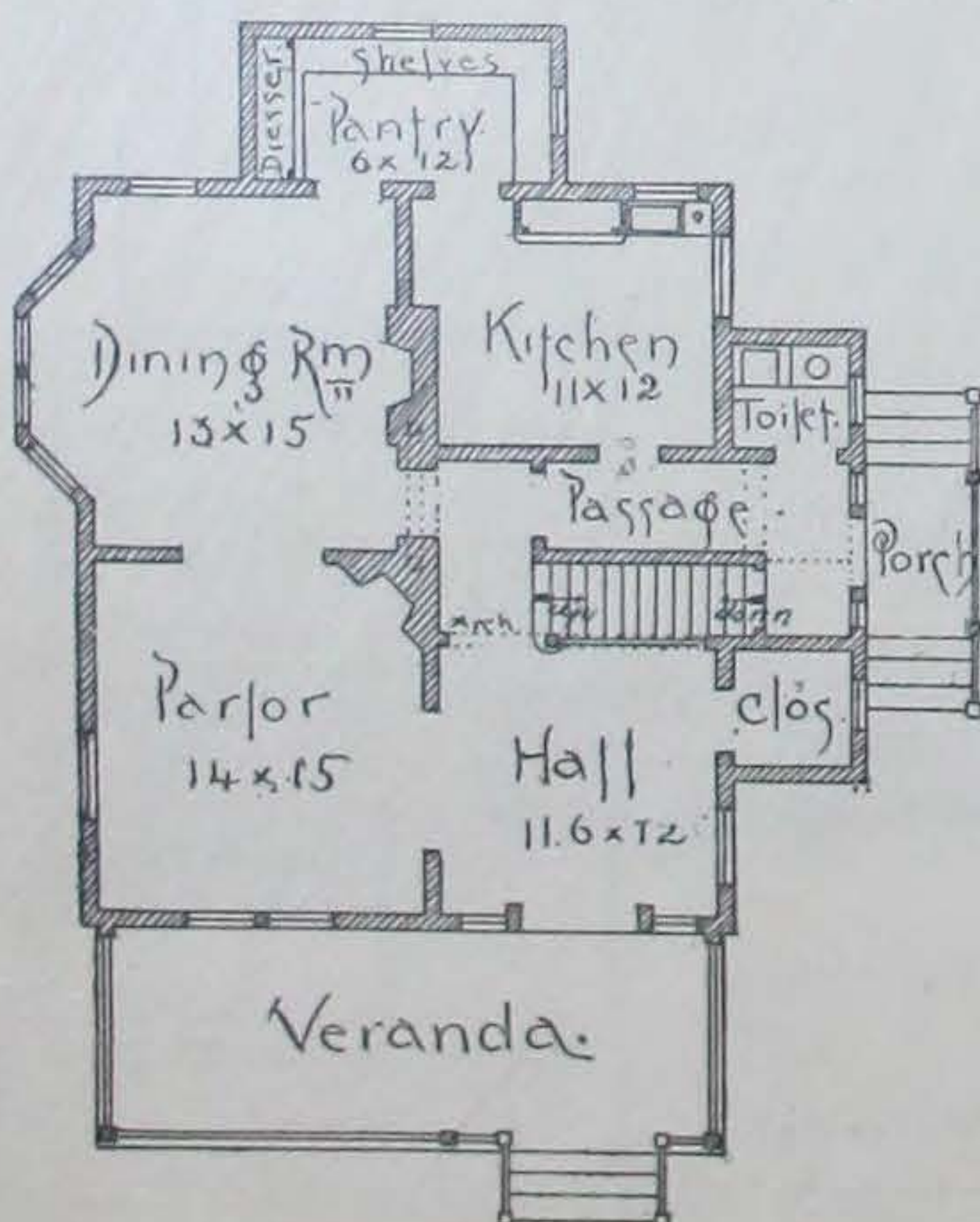
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Cellar under part of house only.

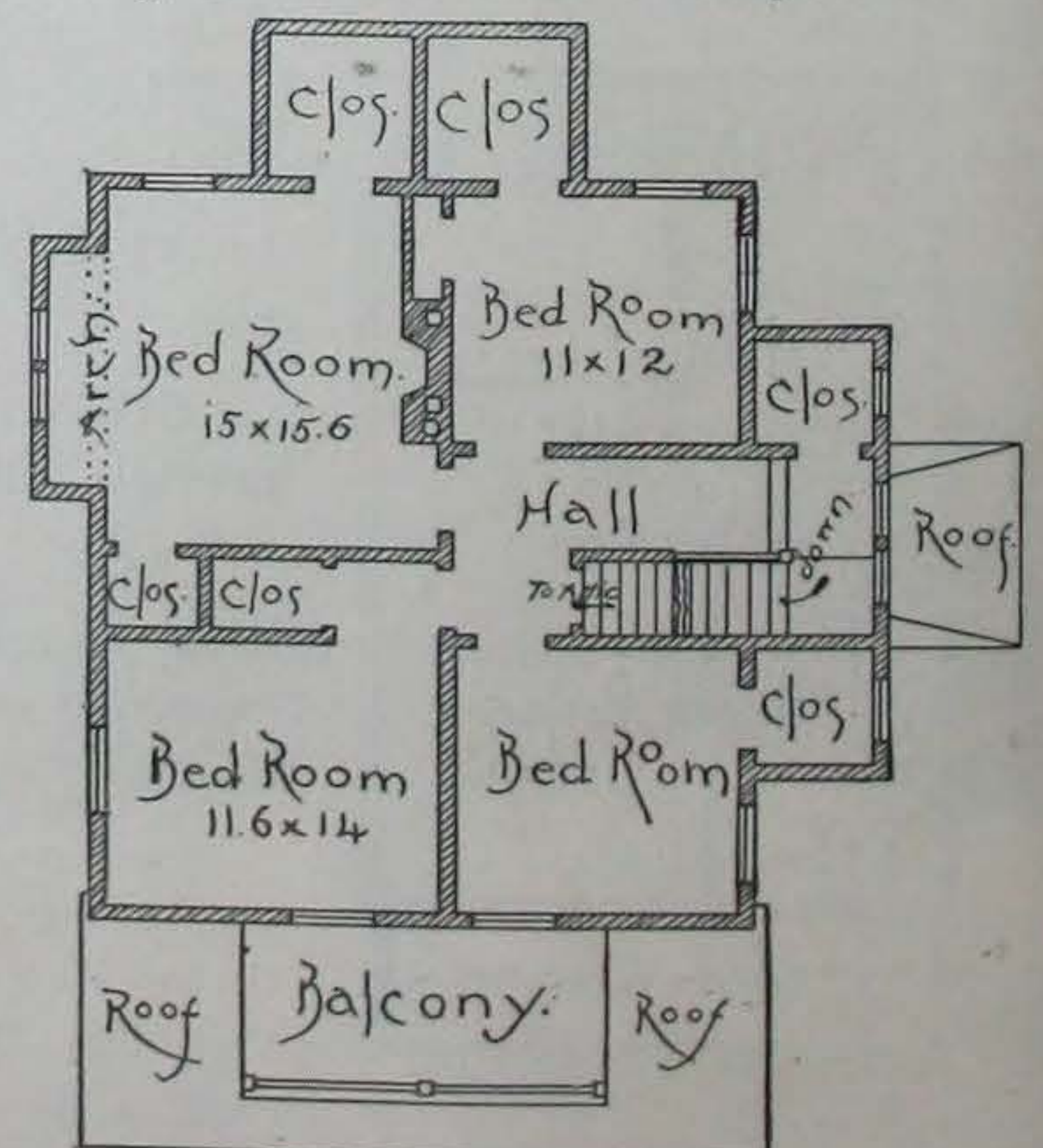
Two good rooms and plenty of store-room in the attic.

Toilet room on first floor, convenient to the stairway and to the side entrance.

A good feature is the isolation of kitchen from the "living" part of house. The staircase, partly screened from the hall by an arch, is very pretty and attractive in execution.



FIRST FLOOR. NO. 266



SECOND FLOOR. NO. 266



DESIGN No. 267. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 267

COST: \$3,000, complete.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

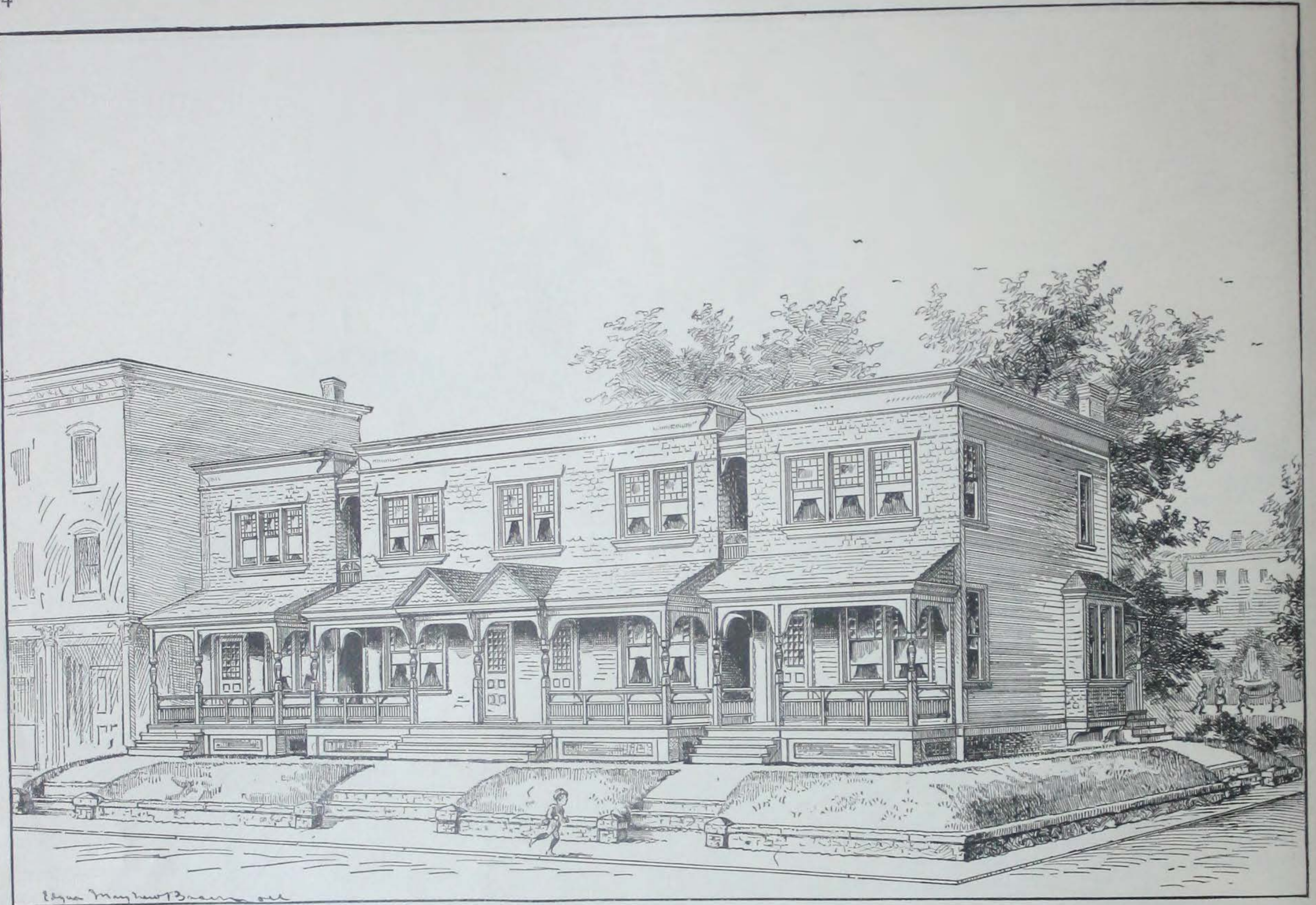
This is simply a modified exterior for the plans of Number 266. The balcony is covered and the front room in the attic enlarged, which is here large enough for a good billiard-room.

HINTS ON HEATING

LIGHT a fire in the sitting-room grate or stove and it will immediately commence to consume the air of the room, as well as the fuel: the fire must have a draught. As the air of the room is consumed, every cranny and window crevice, every door, even the little parting joints of the floors, contribute to the supply of air. The air thus contributed is cold, so we see that the lighting of our fire invited an attack from the freezing temperature that we wished to escape. This is quite observable when a fire is first lighted. For a few minutes the temperature is colder than before lighting. After a while the room may be so heated that the incoming cold air is seized and heated by the warm air before it has advanced far from the doors, windows and crevices. Then the room is comfortable—except near the fire, where it is too warm. Let the temperature be lowered a little, however, the cold air will advance; and retire again before a higher temperature. Thus it advances and retreats, but always keeps up a vigorous attack. The draughts and varying temperature cause colds and many disorders.

Take another method: Light a furnace fire in the basement, and send the hot air up to the sitting-room through a pipe. The hot air will immediately fly to the crannies and crevices, and seek to escape. It thus attacks and repels the cold air. The reason is, that there is no combustion going on in the sitting-room, and therefore no draught or consumption of air. The demand for air is in the basement, where it should be supplied to the furnace pure and direct from outside of the house.

These comparative examples, which many have observed for themselves, point very emphatically to the use of basement furnaces for heating. We could give them our unqualified approval (in conjunction with fireplaces to insure ventilation), if it were not for the devitalized air that often comes from overheated metal. We would like to see some manufacturer put into practical shape a clay-heating surface for ordinary furnaces. It has been thoroughly demonstrated that a fire-clay heating surface always gives off a pure and balmy air.



ROW OF VILLAGE HOUSES. DESIGN No. 268. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 268

SIZE OF STRUCTURE: Front, 75 ft. Side, 43 ft.
SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft., 6 in.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, clapboards, except in front, which is shingled; Roof, tin.

COST: \$1,800 for each house complete, except kitchen range.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some

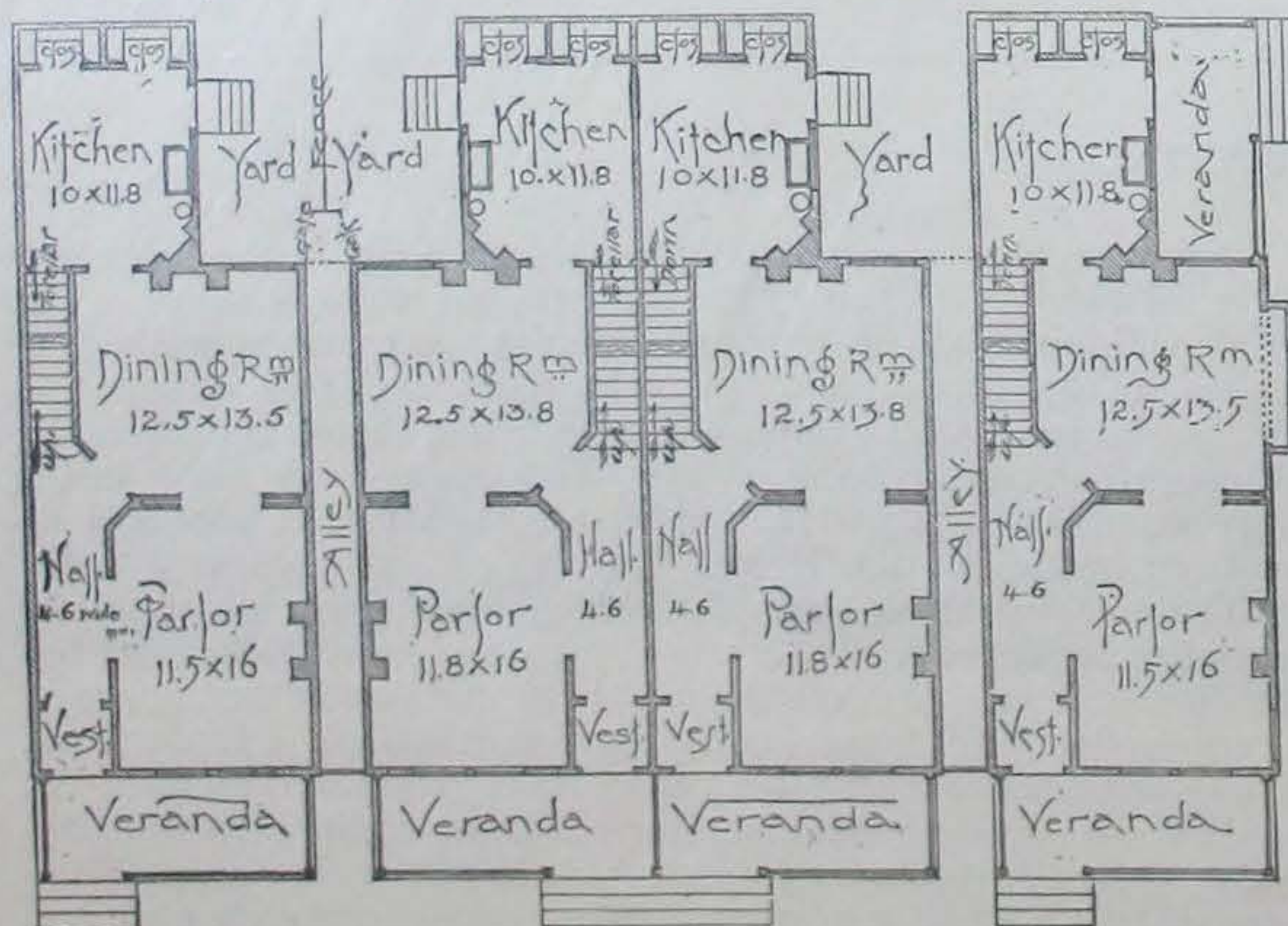
places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

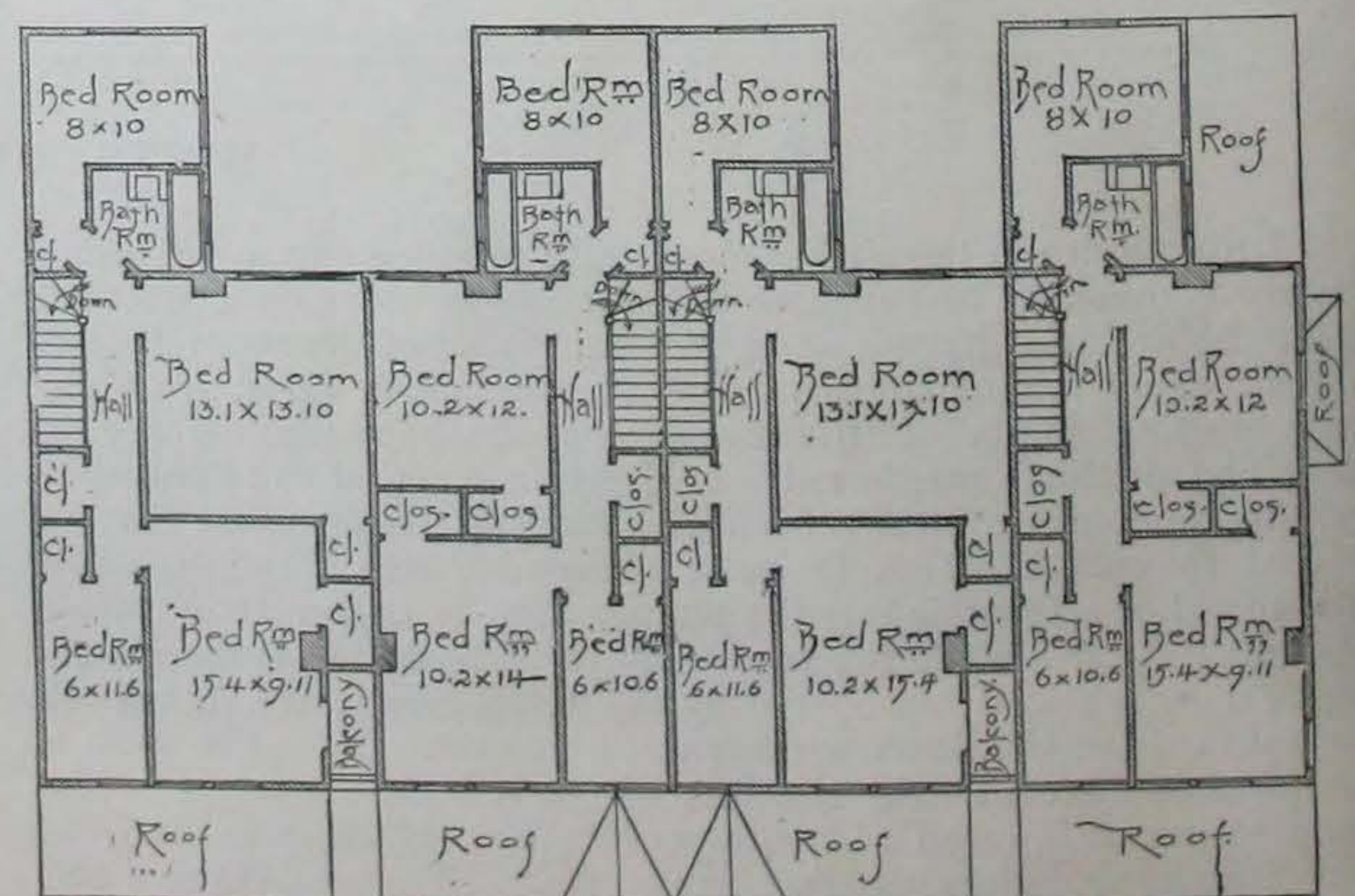
SPECIAL FEATURES.—Alley-ways, 2 ft. 8 in. wide, afford access to the rear doors and backyards of three of the houses. The rear door of the fourth or corner house is reached from the side street.

The second stories of two of the houses are enlarged by being built over the alley-ways.

The capitalist who builds houses of this size and class makes a good investment.

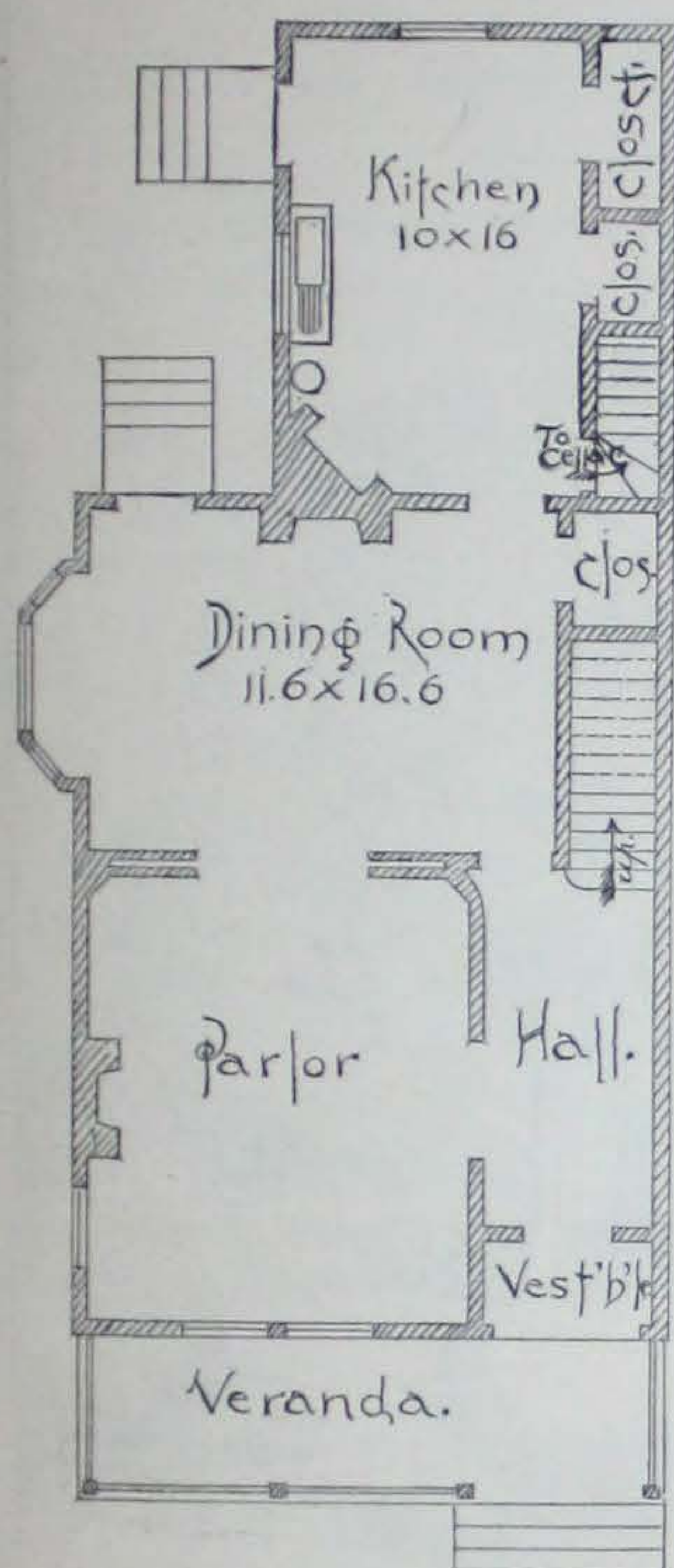


FIRST FLOORS. NO. 268



SECOND FLOORS. NO. 268

DESCRIPTION OF DESIGN NUMBER 269



FIRST FLOOR. NO. 269

SIZE OF STRUCTURE: Front, 21 ft.; including bay-window, 23 ft., 6 in. Side, 45 ft., 10 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft., 6 in.; First Story, 9 ft., 6 in.; Second Story, 9 ft.

MATERIALS: Foundation, brick and stone; First Story, clapboards; Second Story, shingles (front); all the other parts clapboards; Roof, tin.

COST: \$2,000, complete, except kitchen range and mantels.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

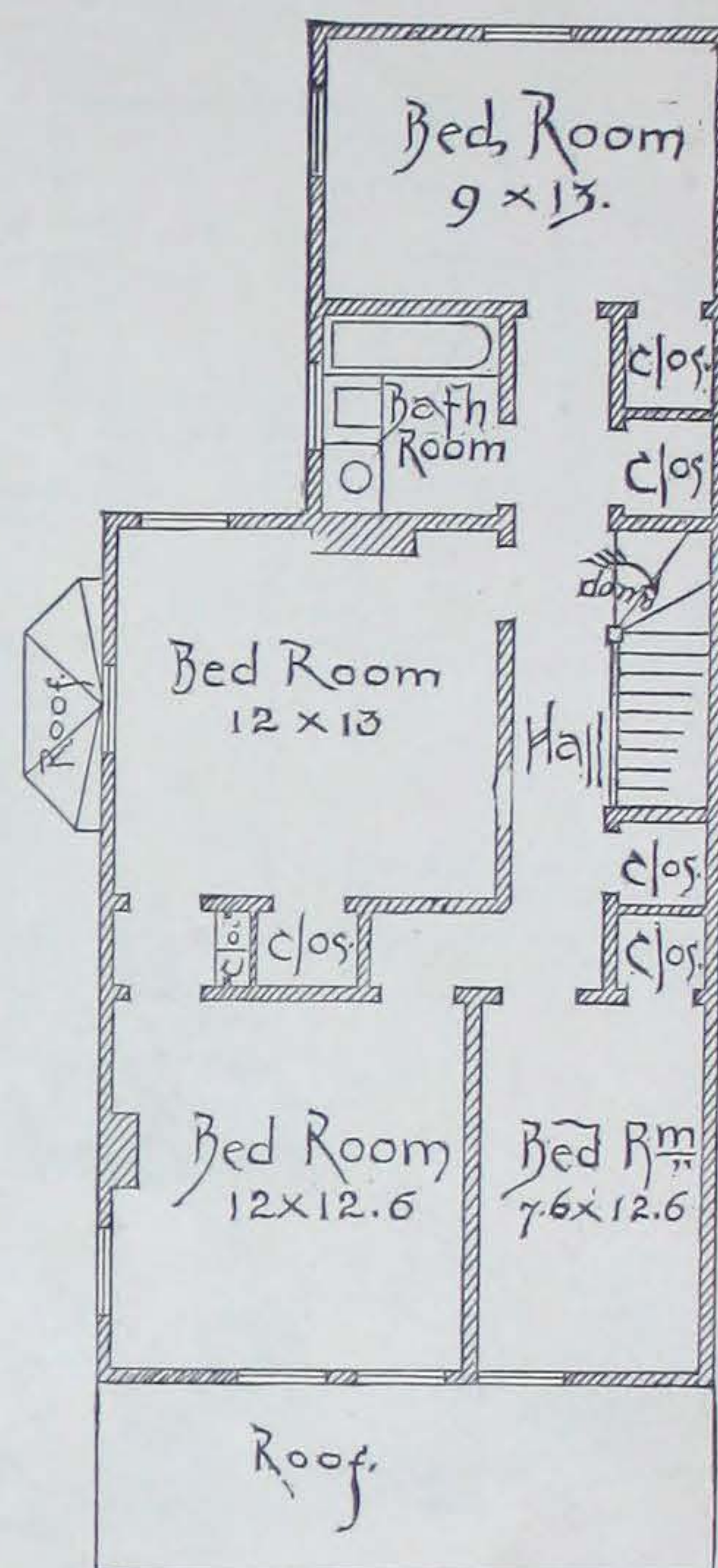
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—The exterior is in the same style as shown by the row of village houses on the preceding page.

Suitable for a narrow city lot.

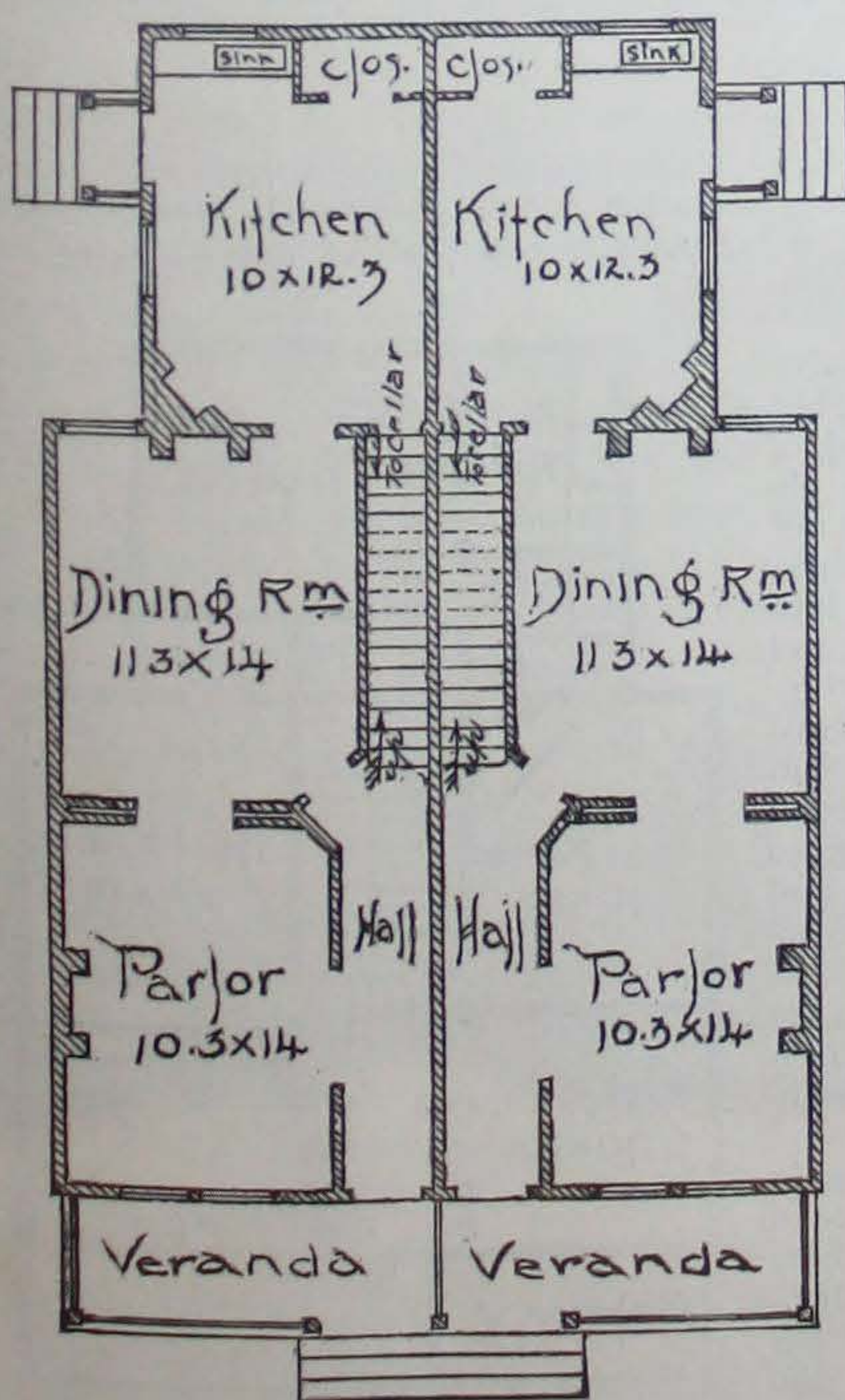
Cellar under the whole house. Laundry in the basement.

There is sufficient air space over the second-floor ceiling to ensure cool rooms.



SECOND FLOOR. NO. 269

DESCRIPTION OF DESIGN NUMBER 270



FIRST FLOORS. NO. 270

SIZE OF STRUCTURE: Front, 29 ft., 6 in. Side, 44 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft., 9 in.; Second Story, 8 ft., 6 in.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles (in front); Roof, tin.

COST: \$3,200, complete, except mantels.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

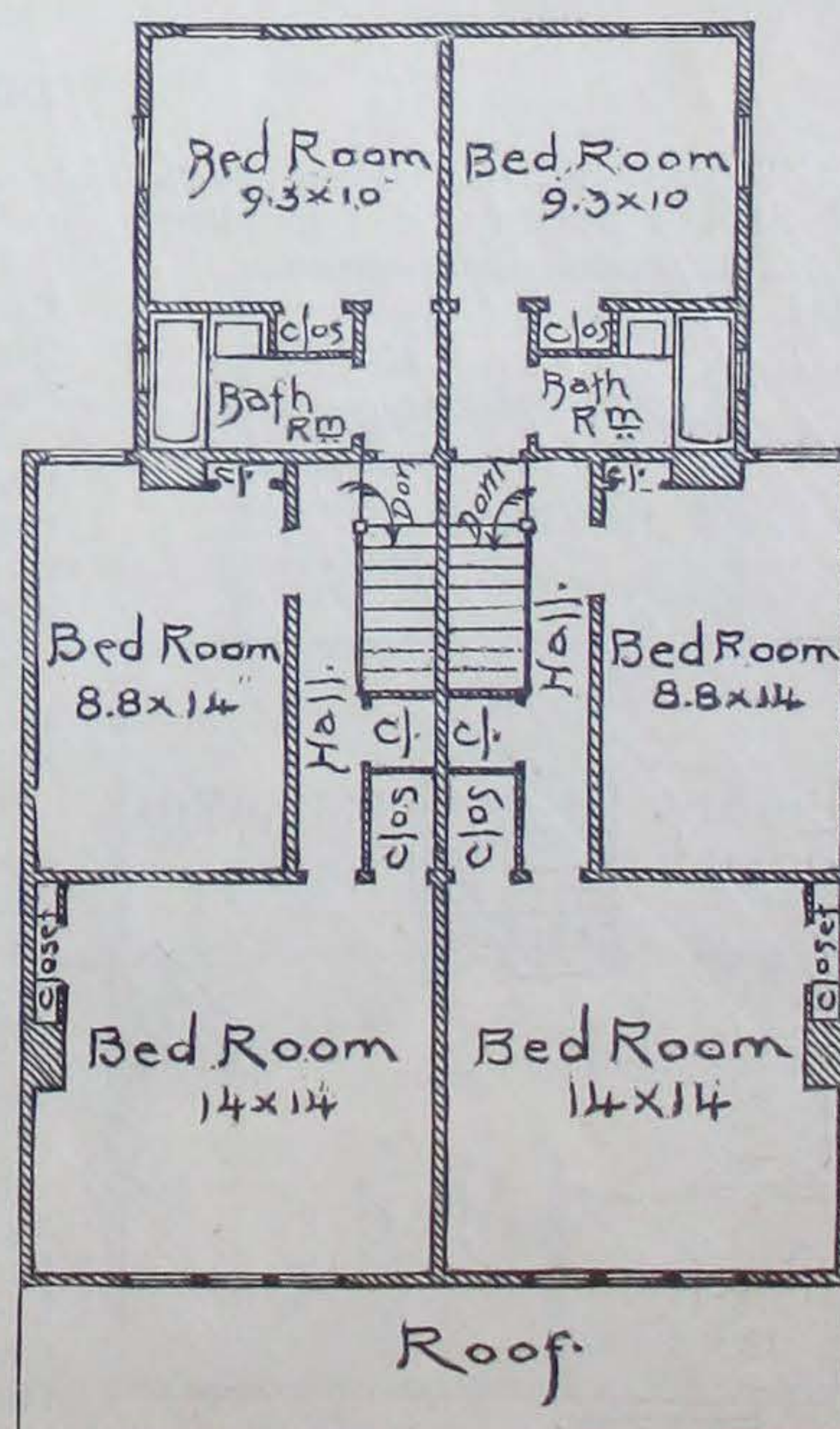
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Double house, with exterior much the same style as the row of village houses on the opposite page.

Cellar under the whole house. Laundry under the kitchen extension.

Suitable for two narrow city or town lots, leaving wide alley-ways at the side of each house.

A very good investment to build and rent.



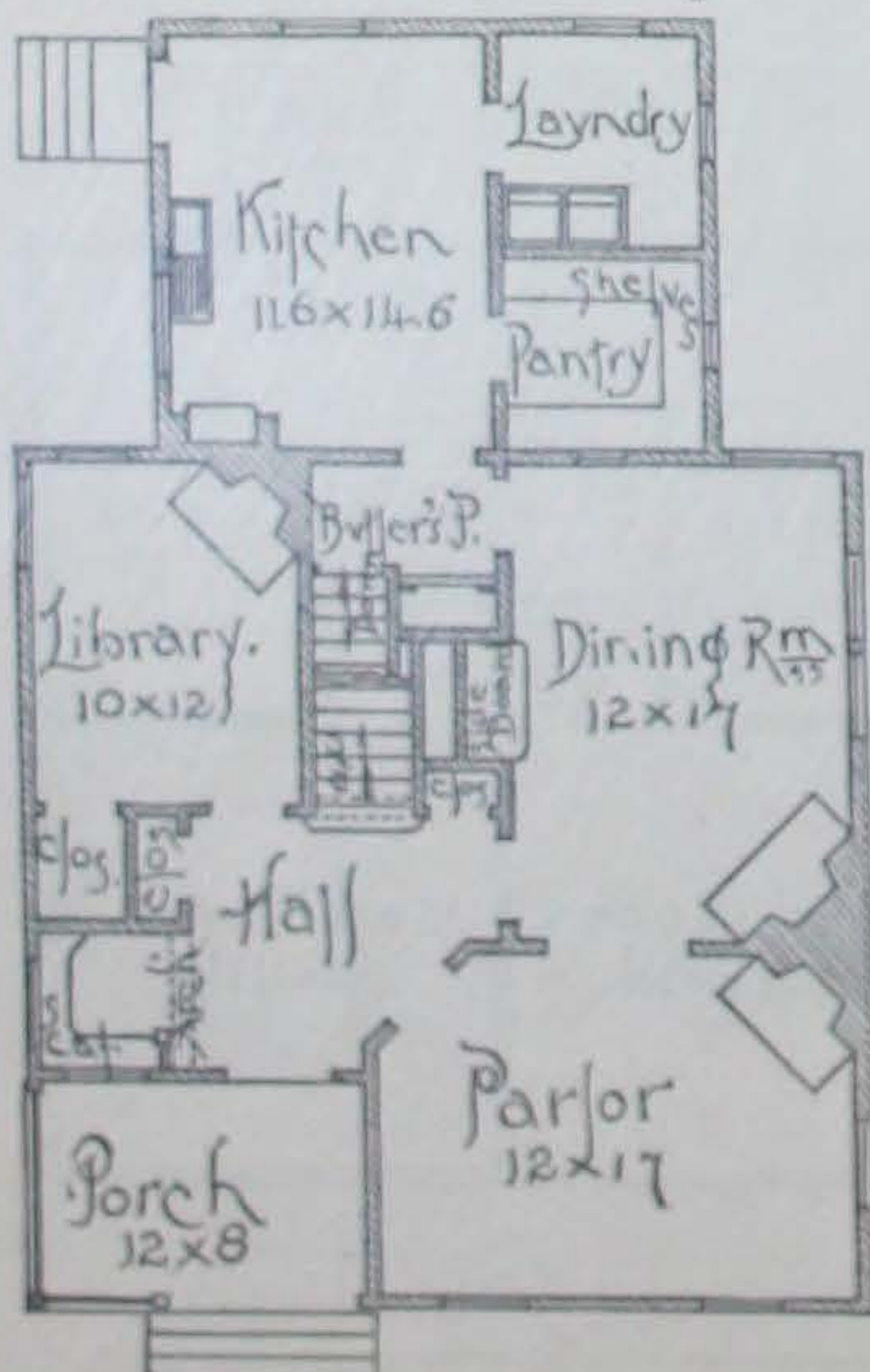
SECOND FLOORS. NO. 270



DESIGN No. 271. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 271

SIZE OF STRUCTURE: Front, 30 ft. Side, 45 ft., 6 in.
 SIZE OF ROOMS: See floor plans.



FIRST FLOOR. NO. 271

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft., 6 in.; Second Story, 9 ft.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$3,000, complete, except mantels and kitchen range.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—The arrangement of floor plans is simple and very compact, giving liberal accommodations for a large family, although the house is not a large one. Closets are numerous and large.

The library, having no connection with the other

rooms, affords complete seclusion for a professional man, or one who has much writing to do; being provided with a fireplace, it makes a very cheerful and comfortable room.

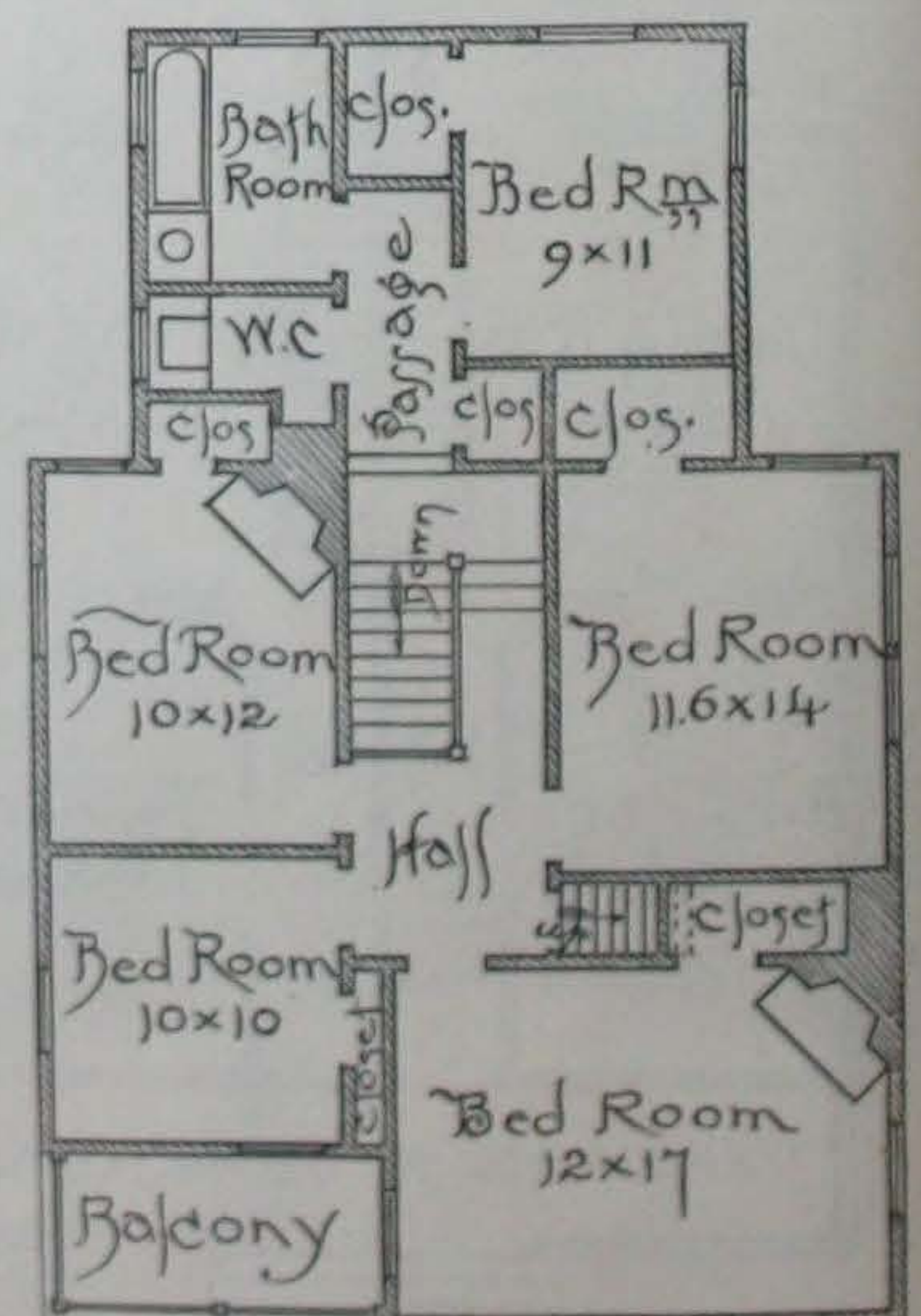
The stairs go up between two partitions, but as they are wide and of easy rise, this is not objectionable; they are not closed off at the bottom, but project slightly into the hall. The stairs and upper hall are lighted by a skylight. A sideboard is built into an arched recess of the dining-room.

The second story gives five good bed-rooms, and two or three can be finished in the attic.

A sensible feature is the separation of the water-closet from the bath-room.

Cellar under the main house; the stairs descend under the main staircase from the butler's pantry.

A curtain is used between the parlor and dining-room.



SECOND FLOOR. NO. 271

DESCRIPTION OF DESIGN NUMBER 272

COST : \$3,200, complete, except range and mantels.

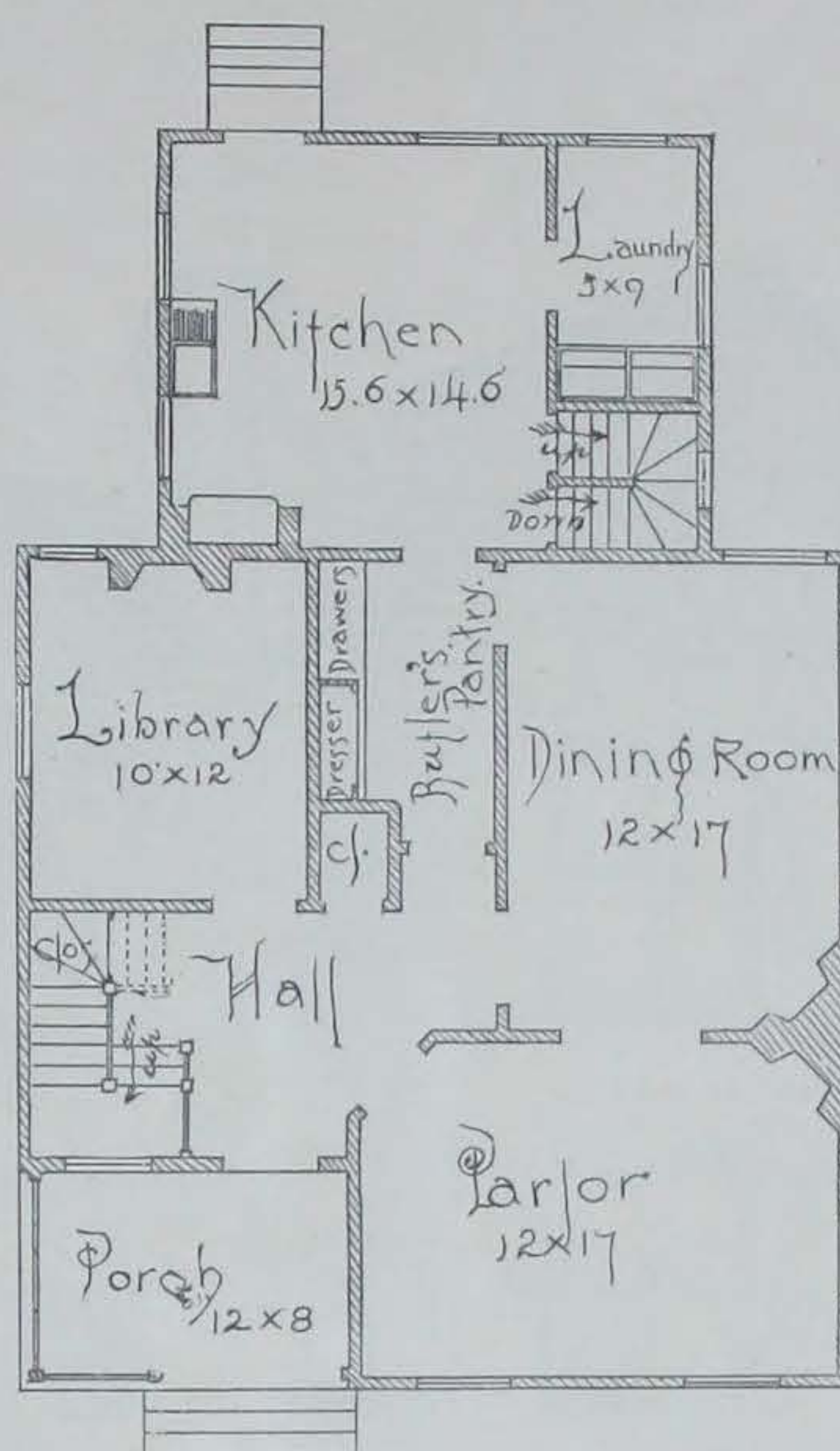
[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

This is a modification of design Number 271, the size of the house, height of stories and exterior appearance being the same. The staircase, instead of being in the centre of the house, as in Number 271, is made a feature of the front hall; the space thus vacated between the library and the dining-room is utilized as a large butler's pantry and hall closet.

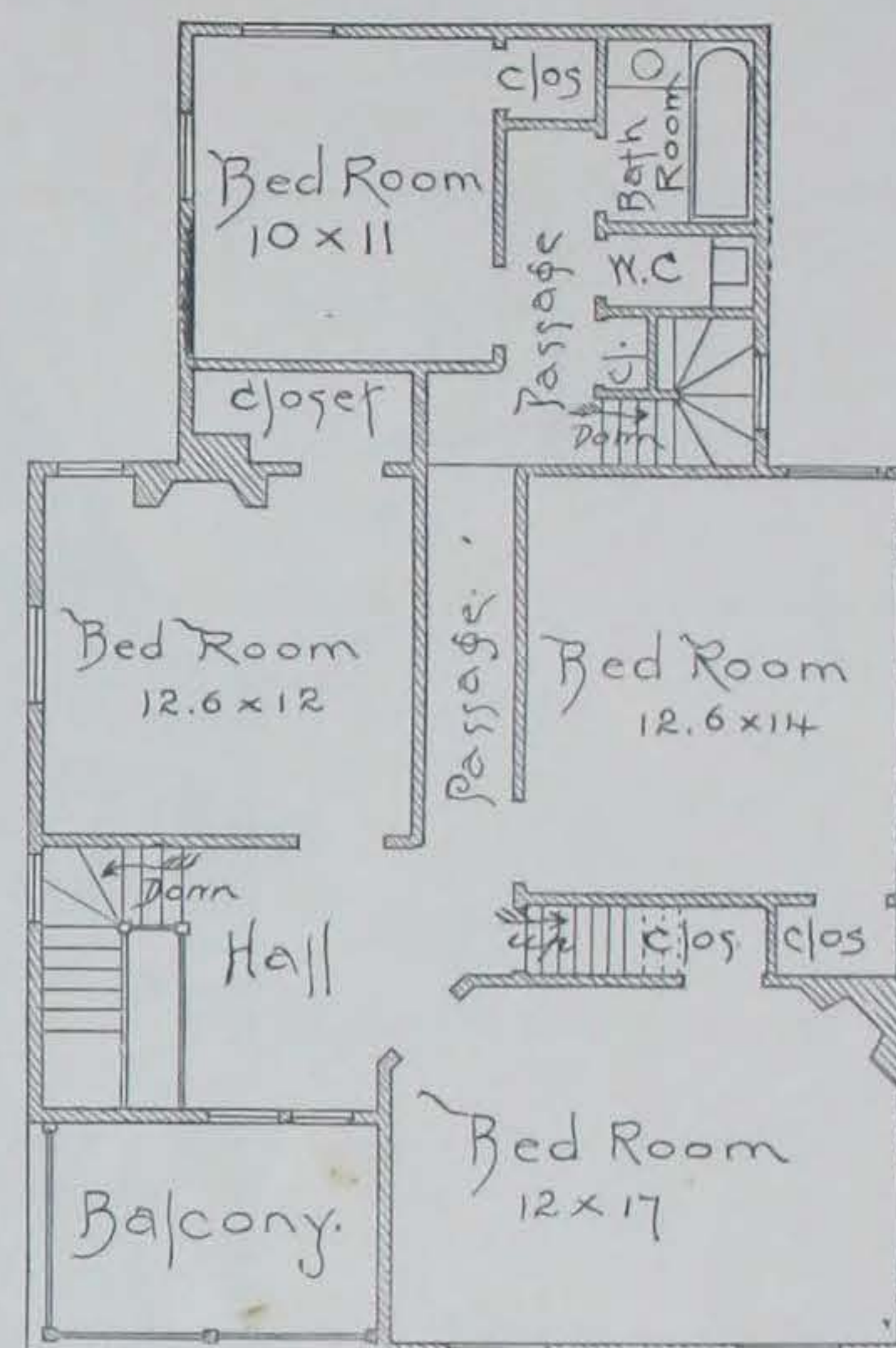
This arrangement loses one bed-room in the second story, but it enlarges two others.

A servants' stairway from the kitchen to the second story is provided, and under it is the stair to the cellar.

The entrance hall is quite large. The pretty staircase makes it one of the most attractive parts of the house. The cellar extends under the whole house.



FIRST FLOOR. NO. 272



SECOND FLOOR. NO. 272

DESCRIPTION OF DESIGN NUMBER 273

COST : Same as design Number 272.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

This is another modification of design Number 271, the size and the general appearance being the same.

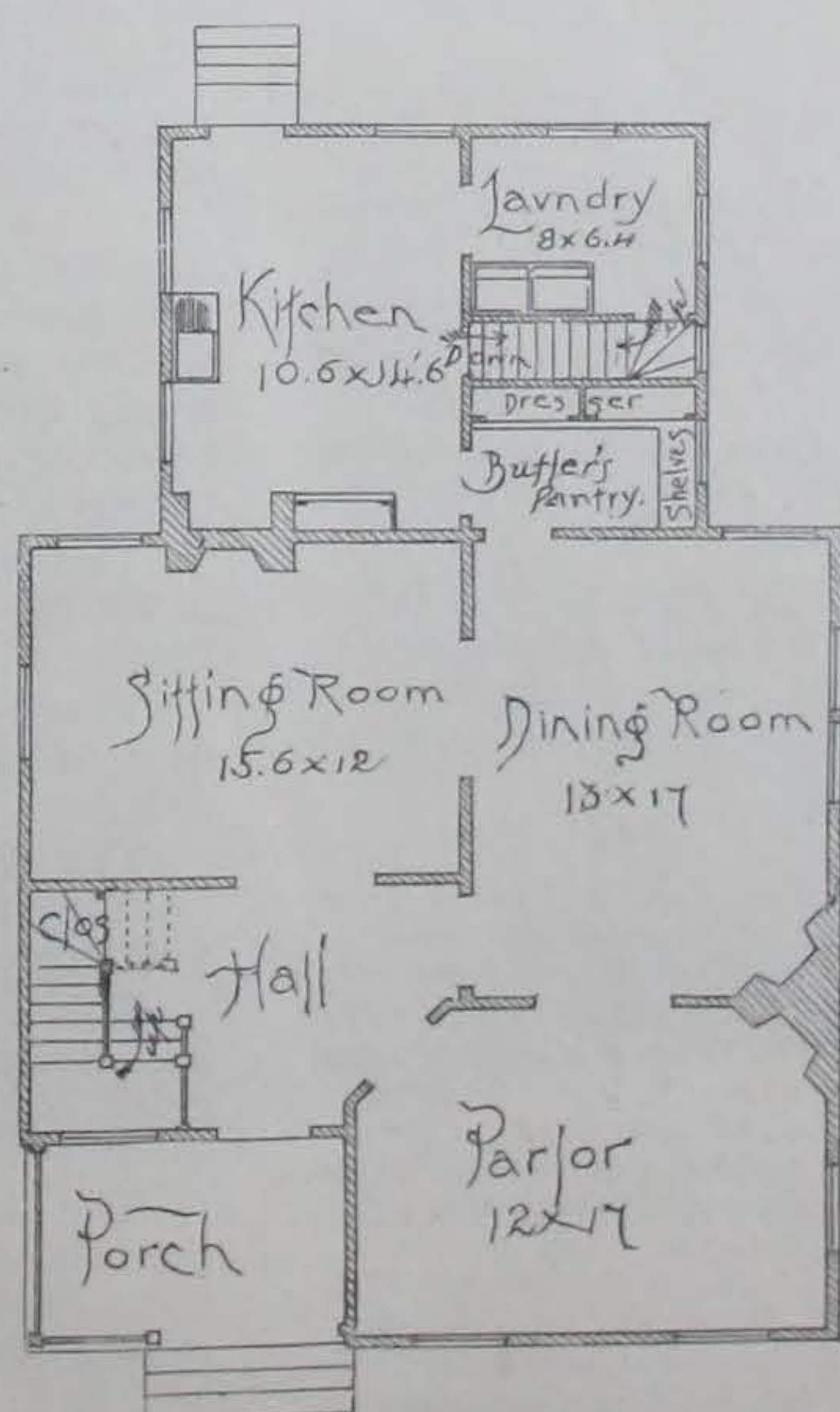
The arrangement of the front hall and staircase is the same as in Number 272, but the butler's pantry in the latter design is done away with, and the space thus gained is given to the sitting-room, which is connected with the dining-room and the hall by large openings intended for double doors or portières.

There is a large butler's pantry in the extension, also a laundry and a rear stairway to the second floor.

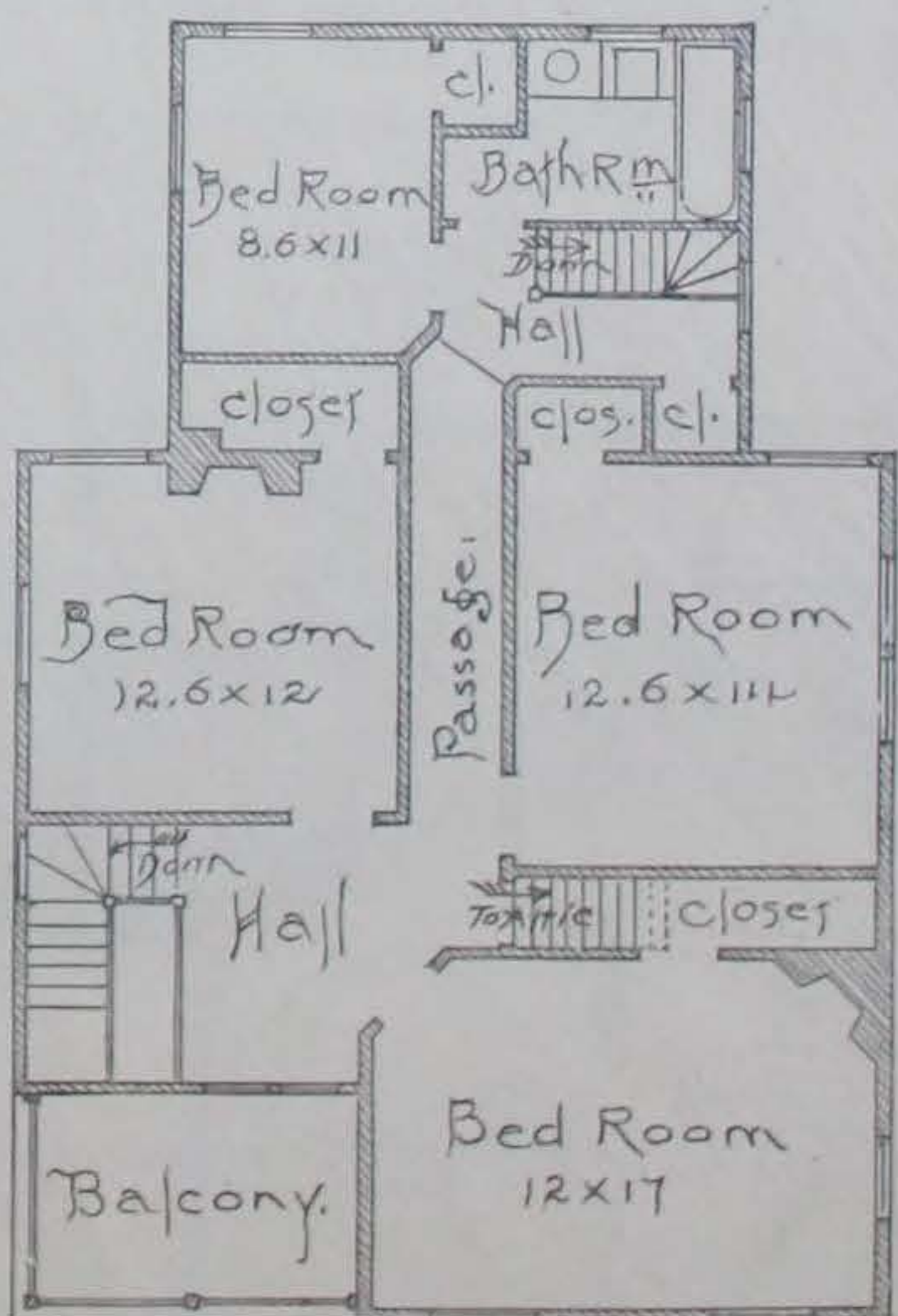
Fireplaces are provided in the parlor, the dining-room and the sitting-room; also in two bed-rooms on

the second floor. This house may be heated by a furnace in the cellar or by fireplace heaters on the first floor. Two of the latter (one in the parlor and one in the sitting-room) would heat the rooms of the first floor and the bed-rooms above. If a furnace is used the open fireplaces should be retained as very useful auxiliaries, and to furnish proper ventilation.

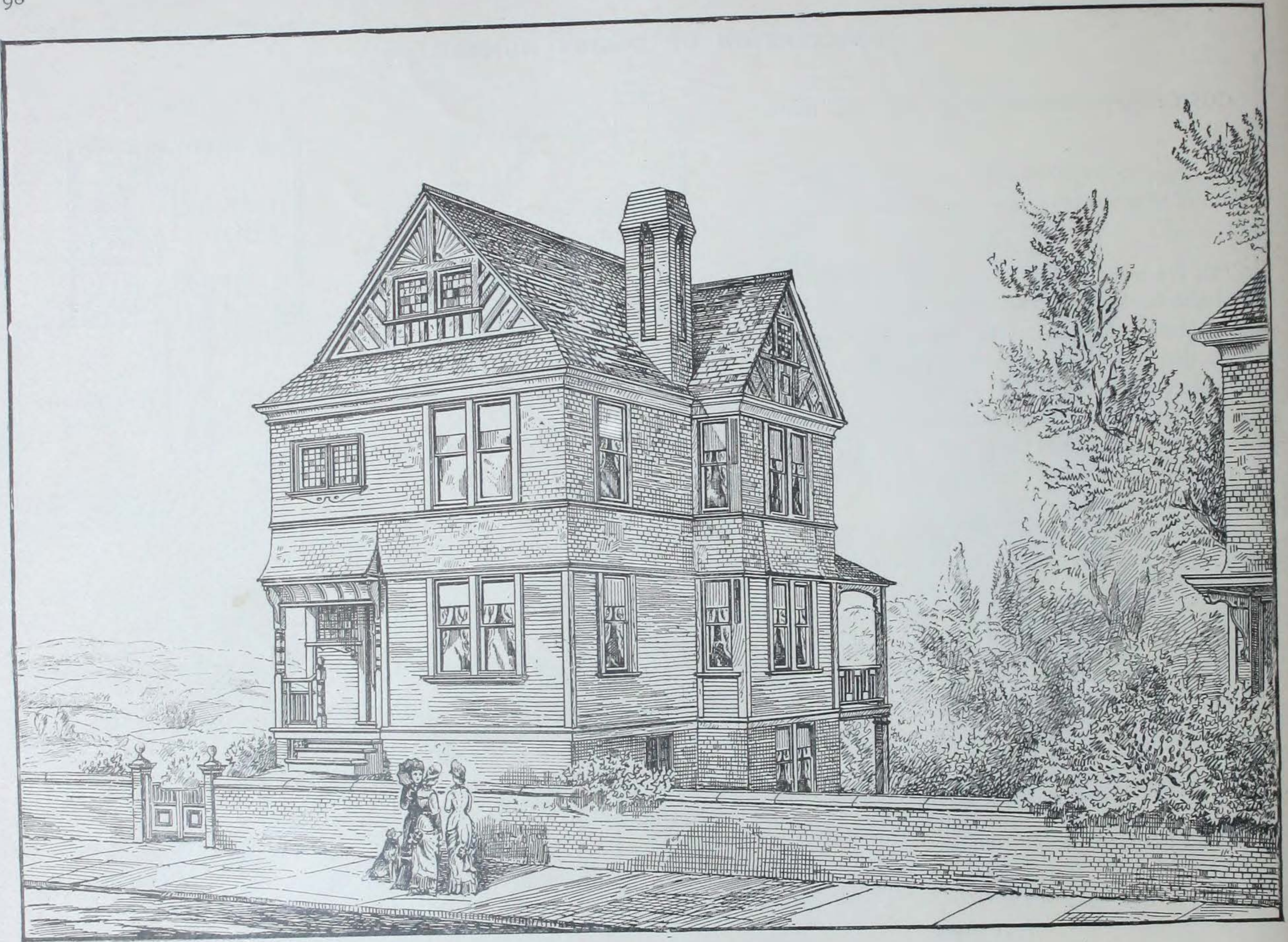
Cellar under the whole house.



FIRST FLOOR. NO. 273



SECOND FLOOR. NO. 273



DESIGN No. 274. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 274

SIZE OF STRUCTURE: Front, 21 ft., 8 in. Side, 29 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Basement, 8 ft., 2 in.; First Story, 9 ft.; Second Story, 8 ft., 6 in.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles; Gables, half timbered; Roof, shingles.

COST: \$2,400, complete, except mantels and heaters.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beau-

ty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—The kitchen, dining-room, scullery and large closets are in the rear part of the basement, and are about on the grade level.

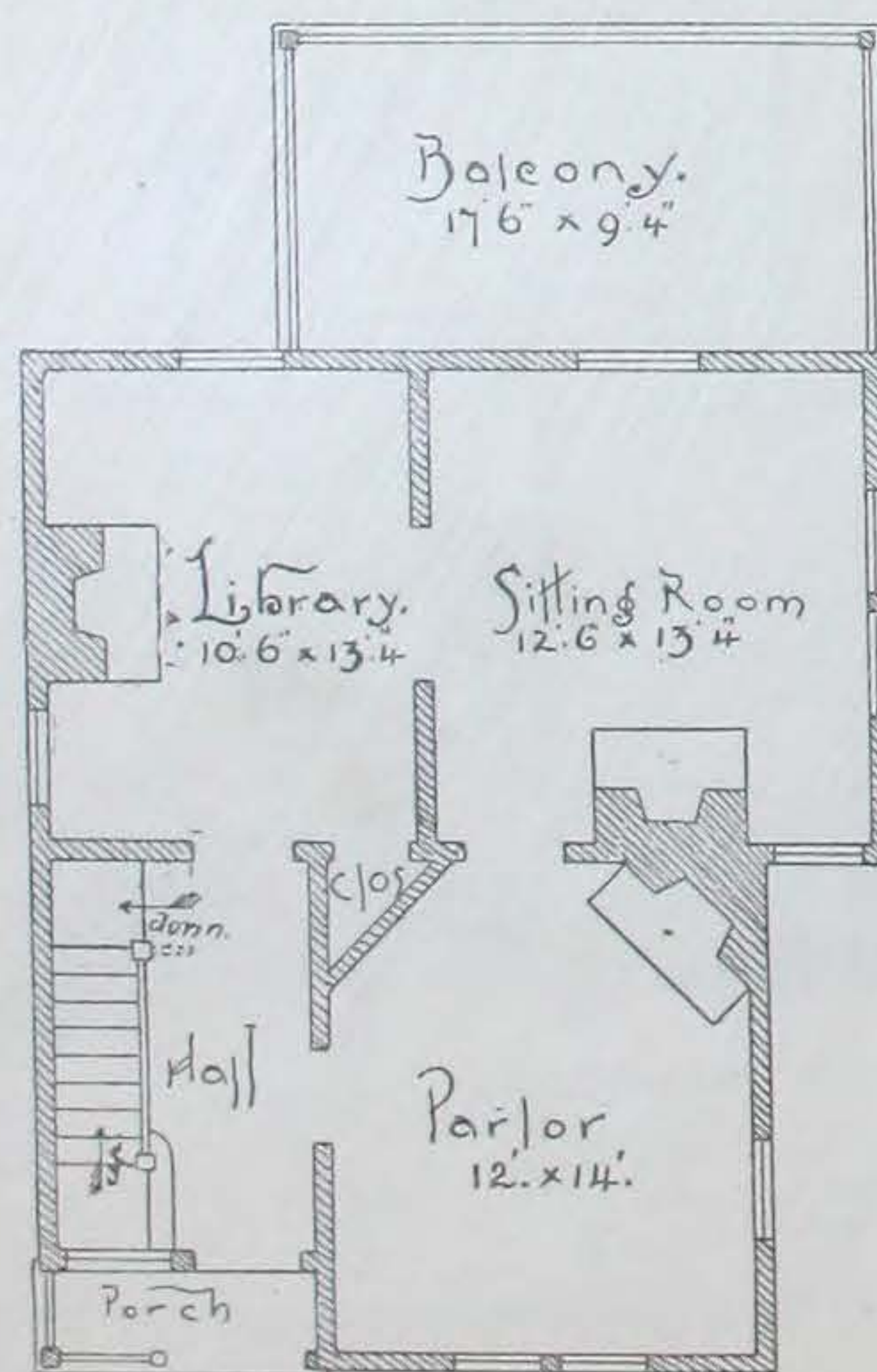
Two water-closets: one in the basement for the servants.

Two rooms and abundant storage-room in the attic.

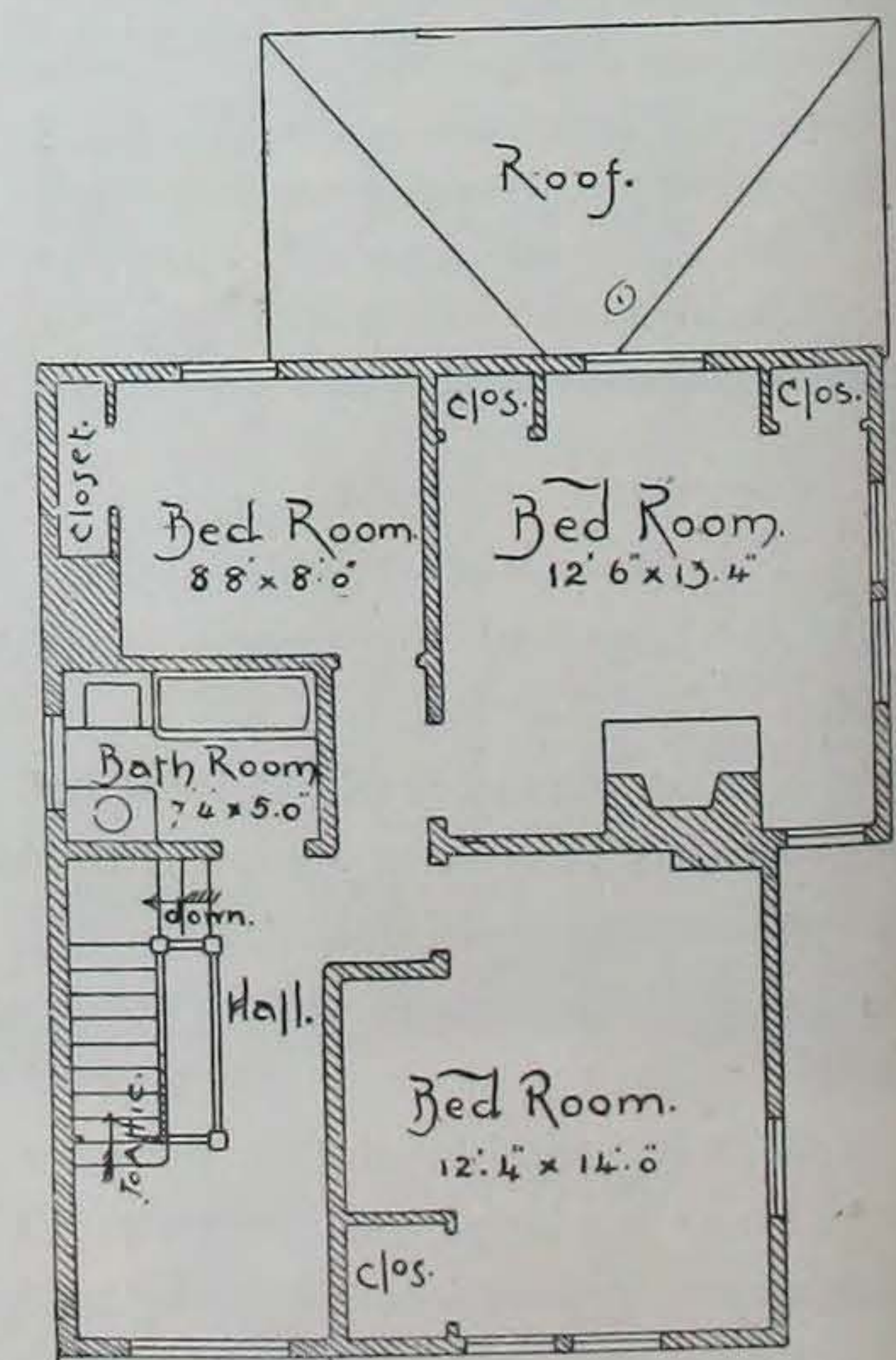
The cellar is under the front of the house, and is well lighted.

This is regarded a capital design for a lot the grade of which declines sharply toward the rear.

The large balcony at the rear of the sitting-room commands a fine view (where this house was built), and is a favorite place of resort in fine weather.



FIRST FLOOR. NO. 274



SECOND FLOOR. NO. 274

DESCRIPTION OF DESIGN NUMBER 275

SIZE OF STRUCTURE: Front, 24 ft., 6 in. Side, 41 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft.; Second Story, 8 ft., 6 in.; Third Story, 7 ft., 6 in.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Gables, half timbered; Roof, shingles.

COST: \$2,500, complete, except mantels and range.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

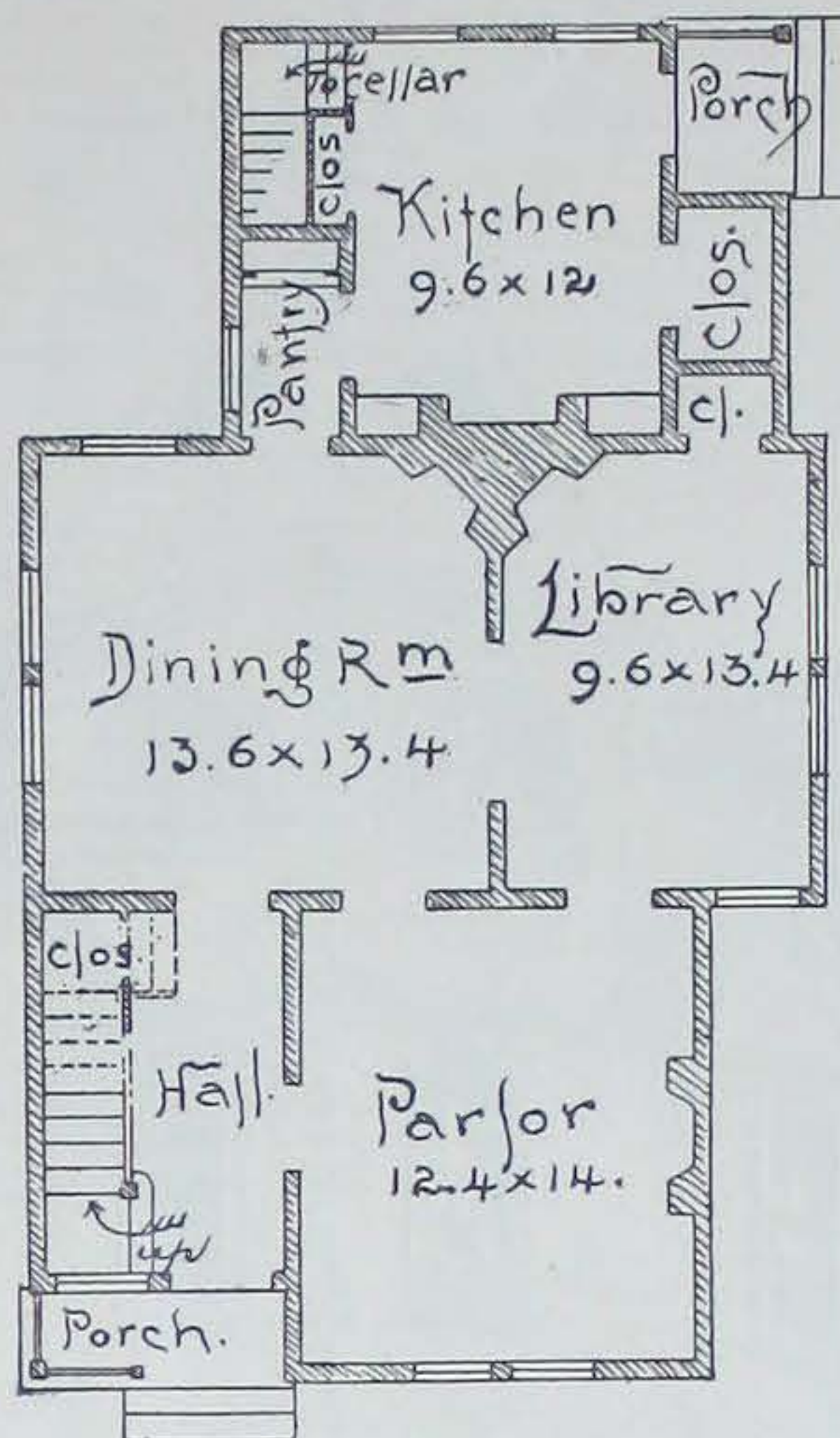
The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

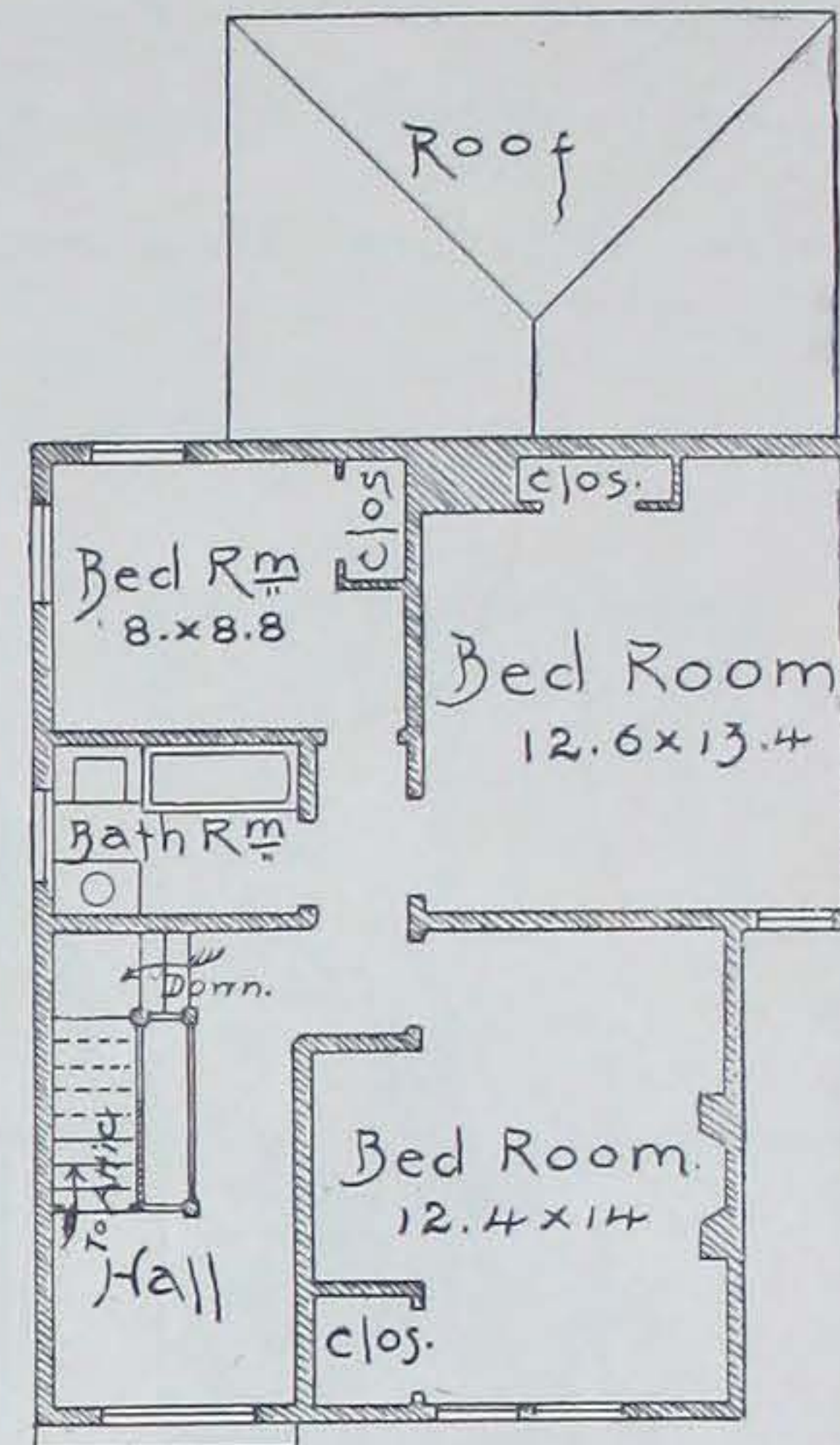
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—This is a modification of the preceding design, Number 274, having a one-story kitchen extension and a rearrangement of the chimneys, adapting it for level ground.

Cellar under the kitchen extension and half of the house.



FIRST FLOOR. NO. 275



SECOND FLOOR. NO. 275

DESCRIPTION OF DESIGN NUMBER 276

SIZE OF STRUCTURE: Front, 36 ft. Side, 41 ft., 6 in.; including veranda, 48 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft.; Second Story, 8 ft., 6 in.

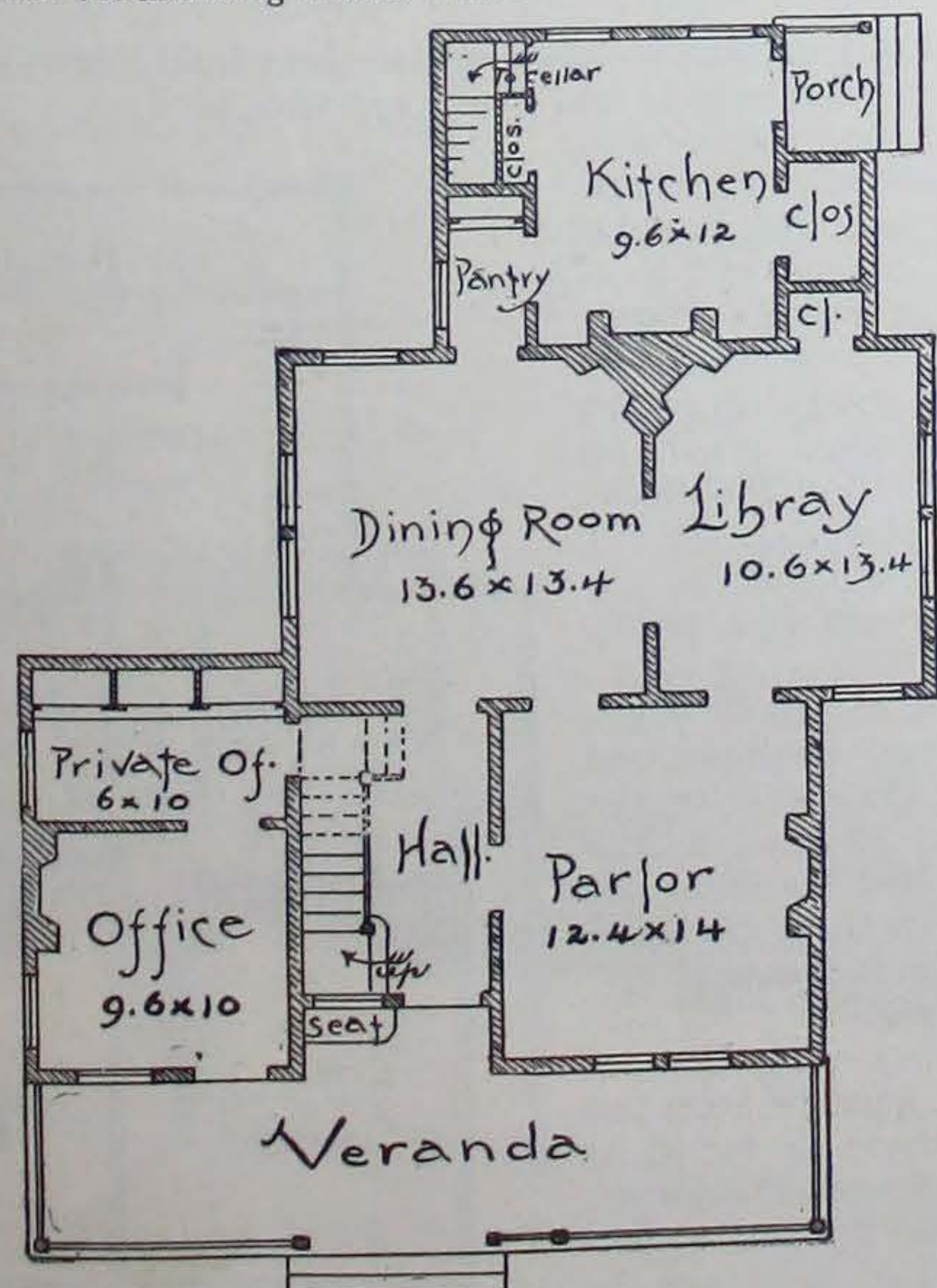
MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Gables, half timbered; Roof, shingles.

COST: \$3,000, complete, except heater, range and mantels.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.



FIRST FLOOR. NO. 276

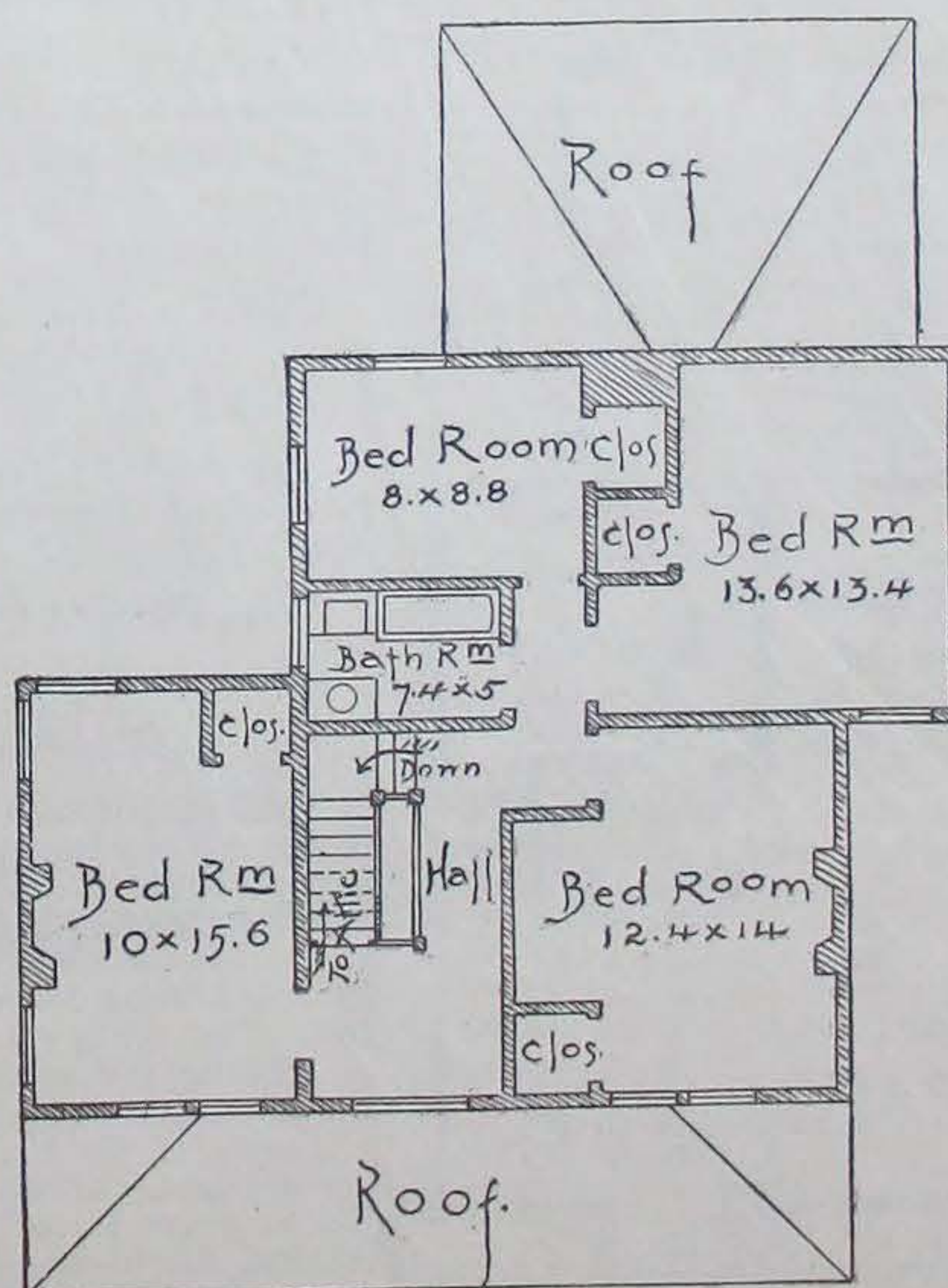
Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

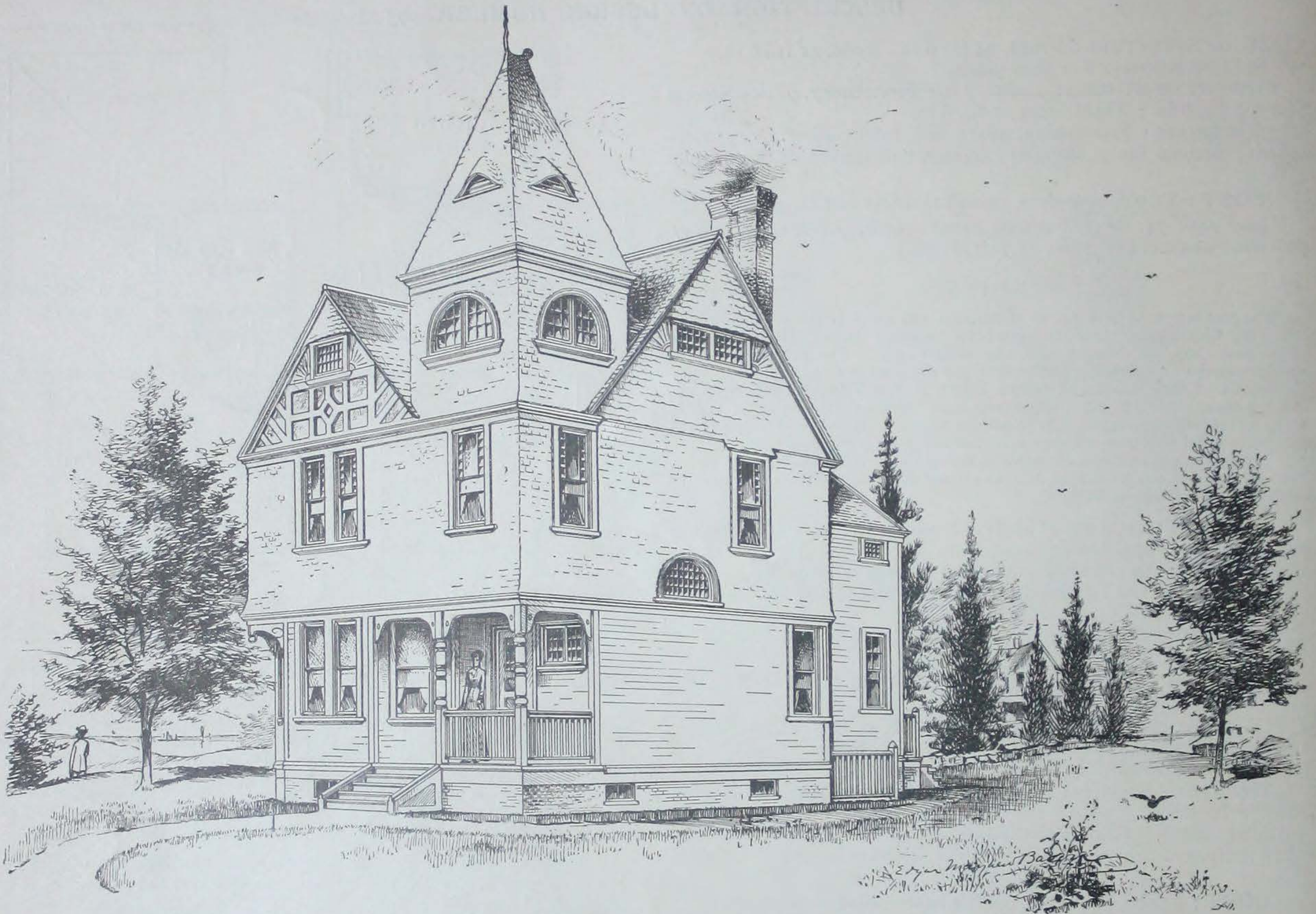
SPECIAL FEATURES.—This is another modification of design Number 274. The exterior appearance is about the same, but it is somewhat more picturesque.

The changes in plans consist of adding a kitchen extension, and a wing on the staircase side, a story and a half in height, making a very convenient office for a physician, with an entrance from the veranda and a doorway opening into the hall of the house; also divided into two rooms, one for a general office and the other for a private office or consulting-room.

The ceiling of the bed-room over the doctor's office is eight feet high, and the walls are five feet high at the lowest point.



SECOND FLOOR. NO. 276



DESIGN No. 277. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 277

SIZE OF STRUCTURE: Front, 25 ft., 2 in. Side, 44 ft., 2 in.
 SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 8 ft., 10 in.; Second Story, 8 ft.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$2,400, all complete, except kitchen range and mantels.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown,

on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Cellar under the whole house, except the kitchen part, with outside and inside entrance to it.

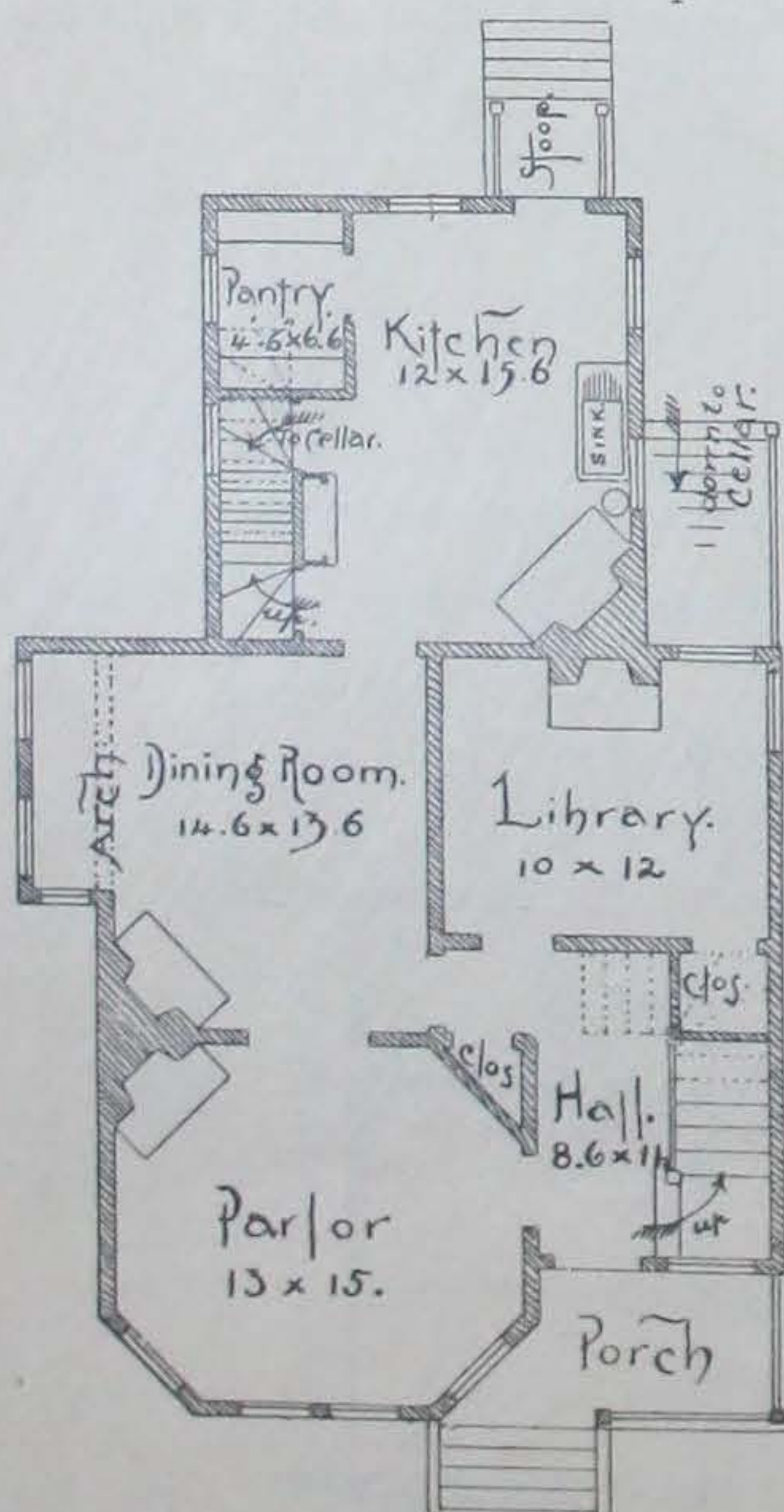
Beside the tower-room there is one bed-room in the attic, and another can be finished, if desired, still leaving plenty of room for storage.

There is good disposition of the chimneys, providing fireplaces in all of the rooms of the first story.

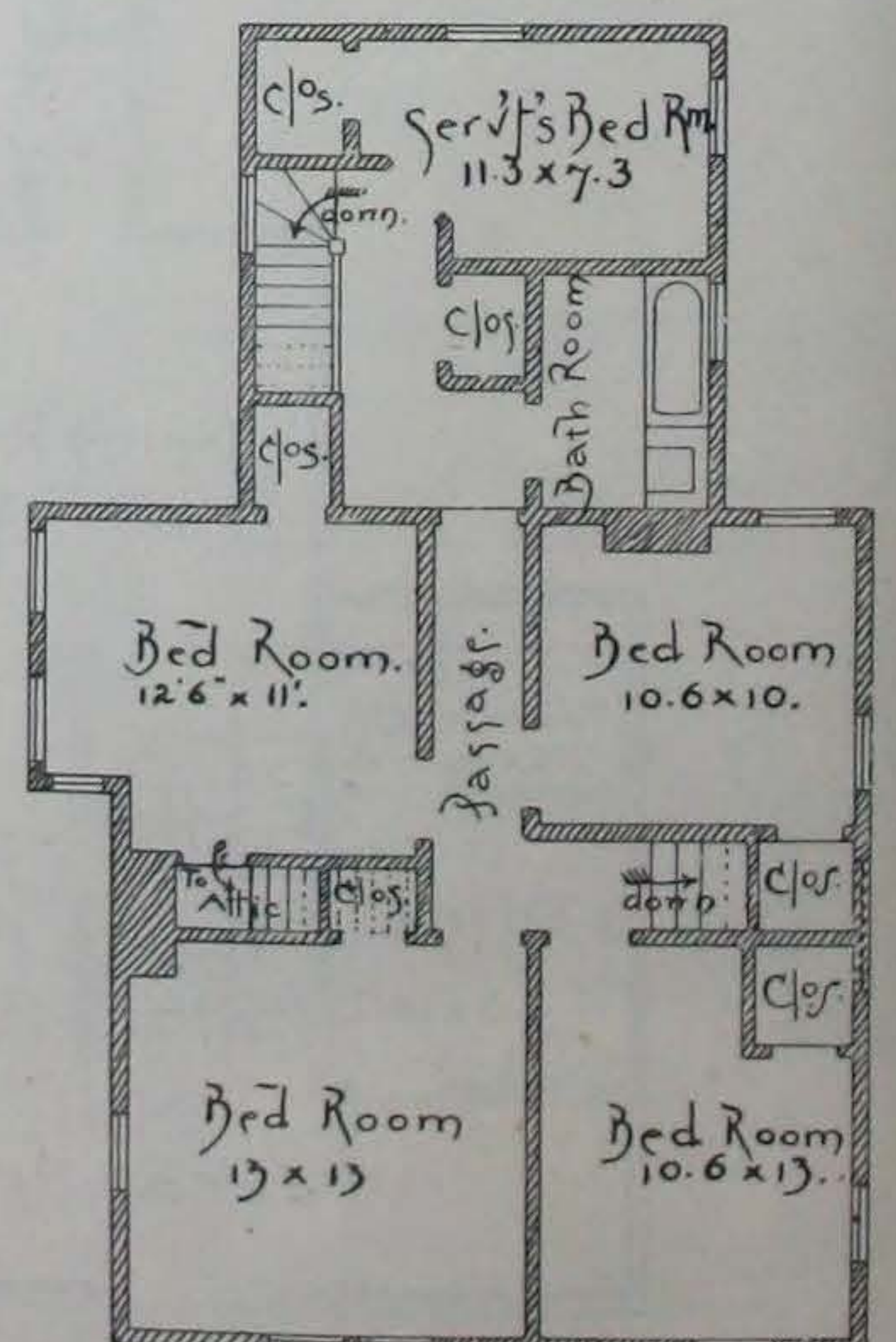
The arched alcove in the dining-room is a pretty feature.

Plenty of closets throughout the house. In the second story the closets over the stairway are elevated a little above the floor in order not to interfere with proper head room for the staircase.

This design is a favorite with Improvement Companies, which must be accepted as an evidence of merit, as expert builders must approve its practicability, and a sagacious board of directors approve it as an investment.



FIRST FLOOR. NO. 277



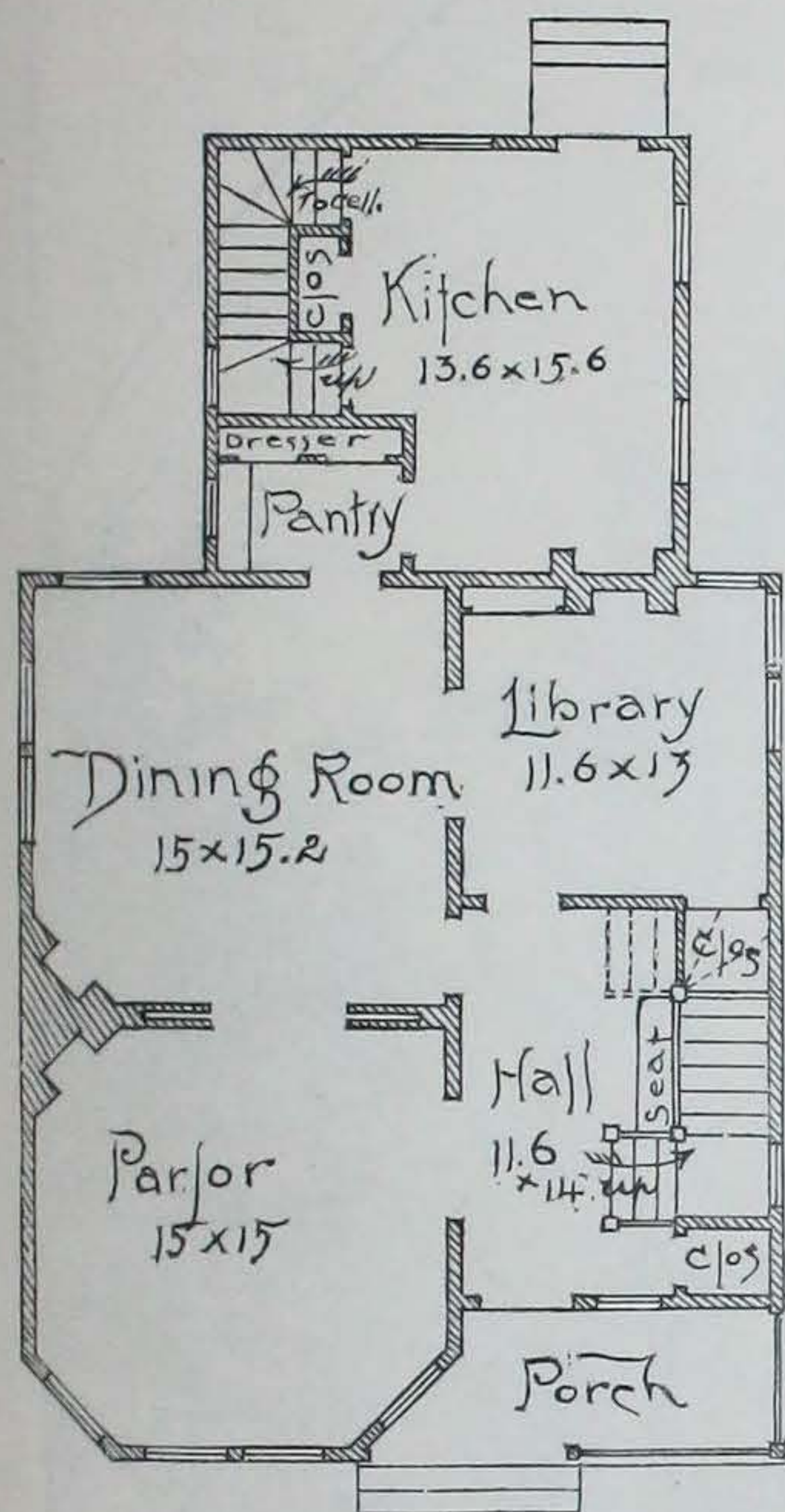
SECOND FLOOR. NO. 277

DESCRIPTION OF DESIGN NUMBER 278

SIZE OF STRUCTURE: Front, 28 ft. Side, 48 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft., 6 in.; Second Story, 9 ft.; Attic Story, 7 ft., 6 in.



FIRST FLOOR. NO. 278

MATERIALS: Foundation, brick and stone; First Story, clapboards; Second Story, shingles; Gables, shingled and half timbered; Roof, shingled.

COST: \$2,700, complete, except mantels and kitchen range.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The

publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

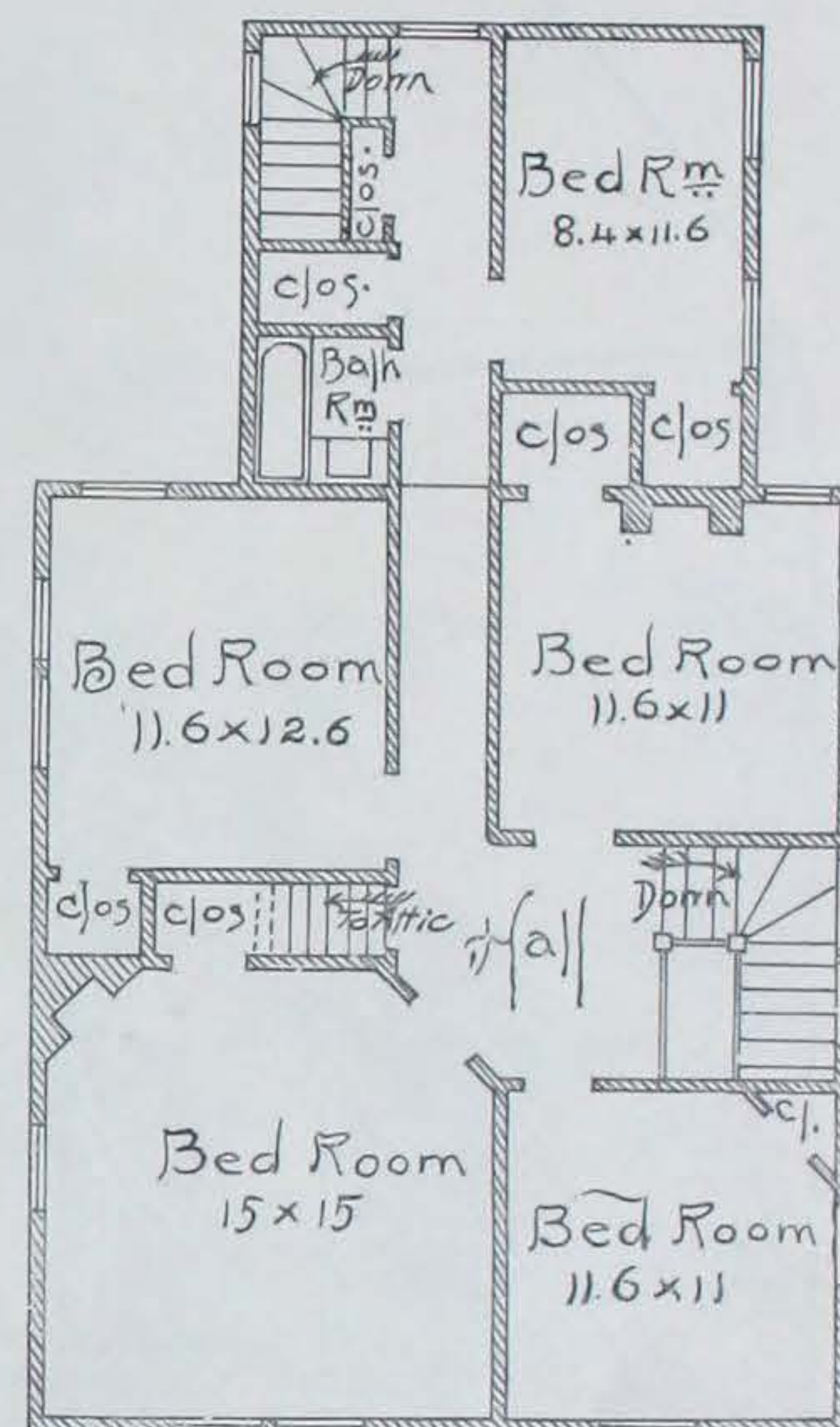
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Exterior appearance similar to the preceding design, Number 277, without the tower.

The staircase coming up in the centre enables us to get five good bed-rooms on the second floor—large accommodations for a house of this size and cost.

Fireplaces in two of the bed-rooms.

Cellar under the extension and half of the main house. Inside stairway to cellar. Two rooms in attic.



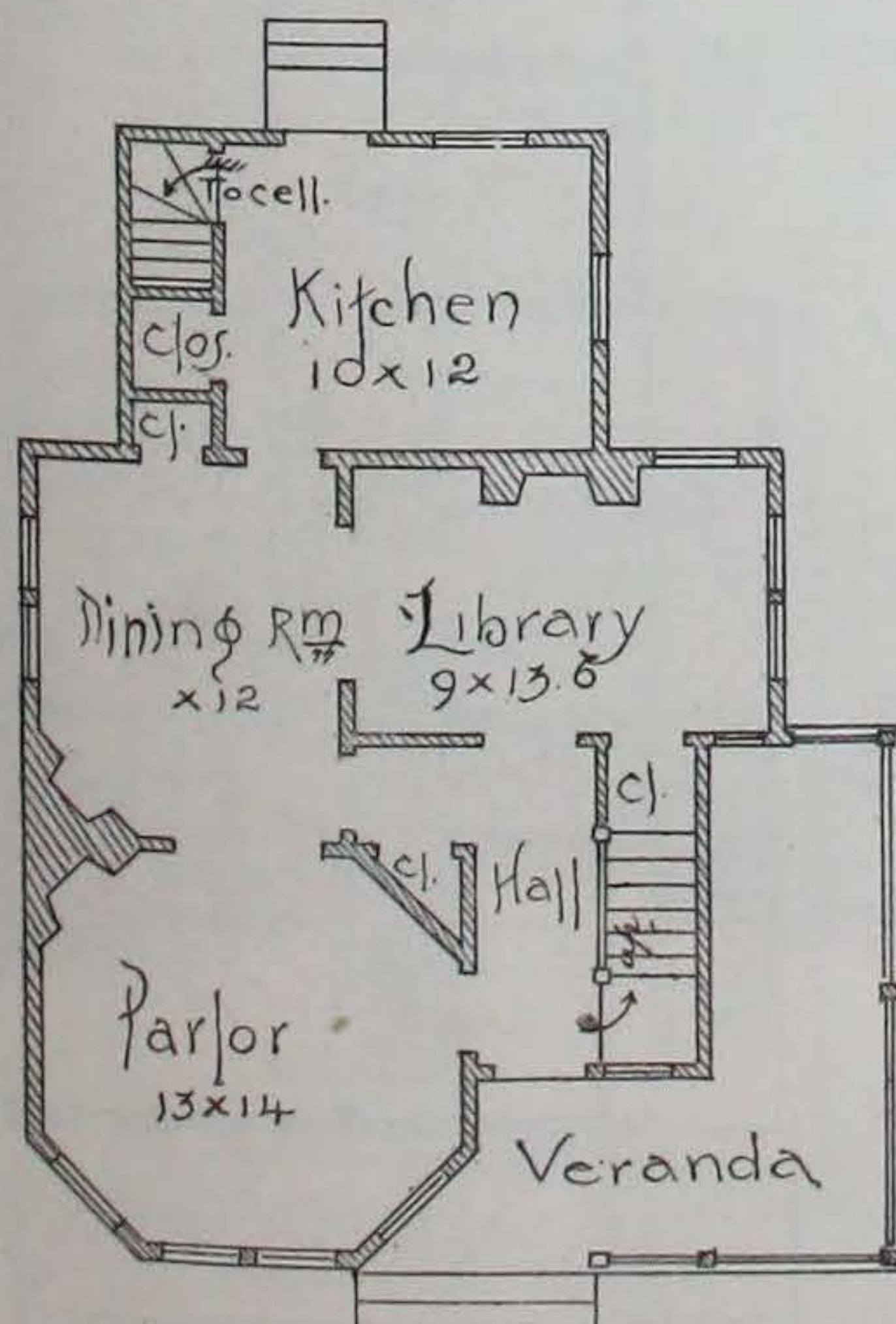
SECOND FLOOR. NO. 278

DESCRIPTION OF DESIGN NUMBER 279

SIZE OF STRUCTURE: Front, 29 ft., including veranda. Side, 36 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft., 4 in.



FIRST FLOOR. NO. 279

MATERIALS: Foundation, posts set in concrete; First Story, clapboards; Second Story, shingles; Gables, shingles and half-timbers; Roof, shingles.

COST: \$1,800, complete, except mantels and kitchen range.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York

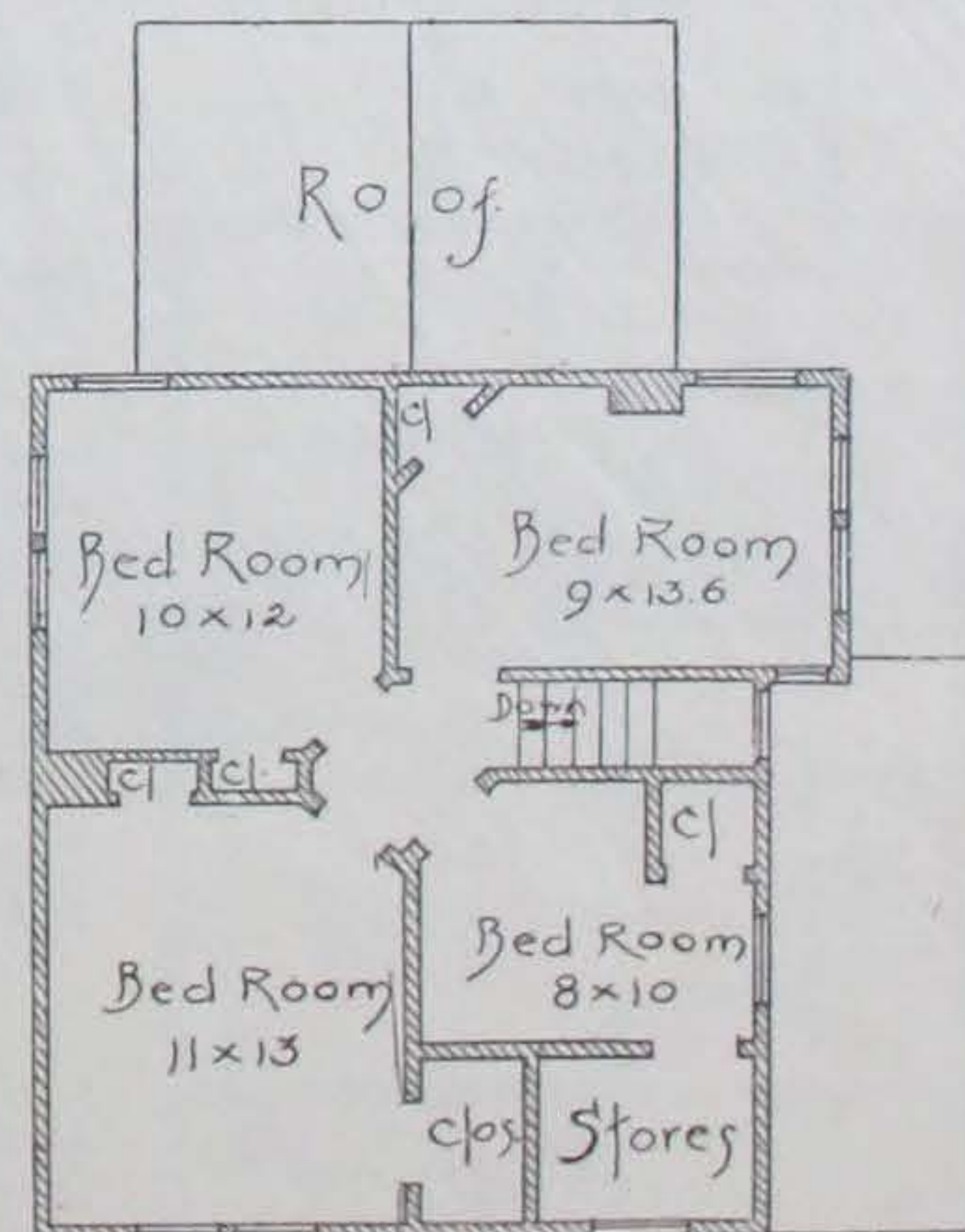
City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

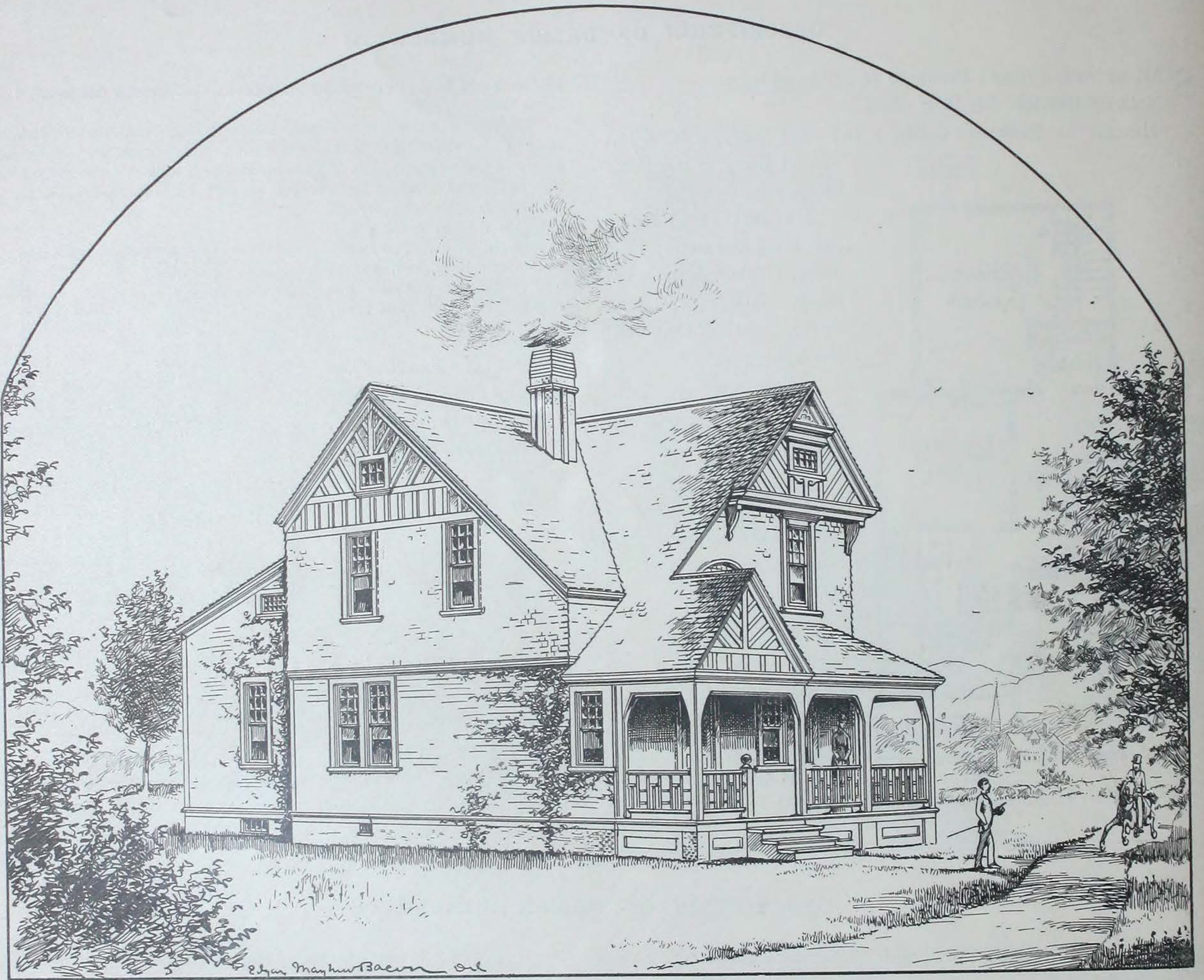
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—The exterior is in the same style as design Number 277 on the preceding page, without the tower. The veranda returns half way around the side.

Cellar under the kitchen only. Two rooms can be finished off in the attic; a stairway to the attic should start out of the small bed-room.



SECOND FLOOR. NO. 279



DESIGN No. 280. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 280

SIZE OF STRUCTURE: Front, 25 ft. Side, 44 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft.; Second Story, 8 ft.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Gables, half timbered; Roof, shingles.

COST: \$2,300, complete, except kitchen range.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

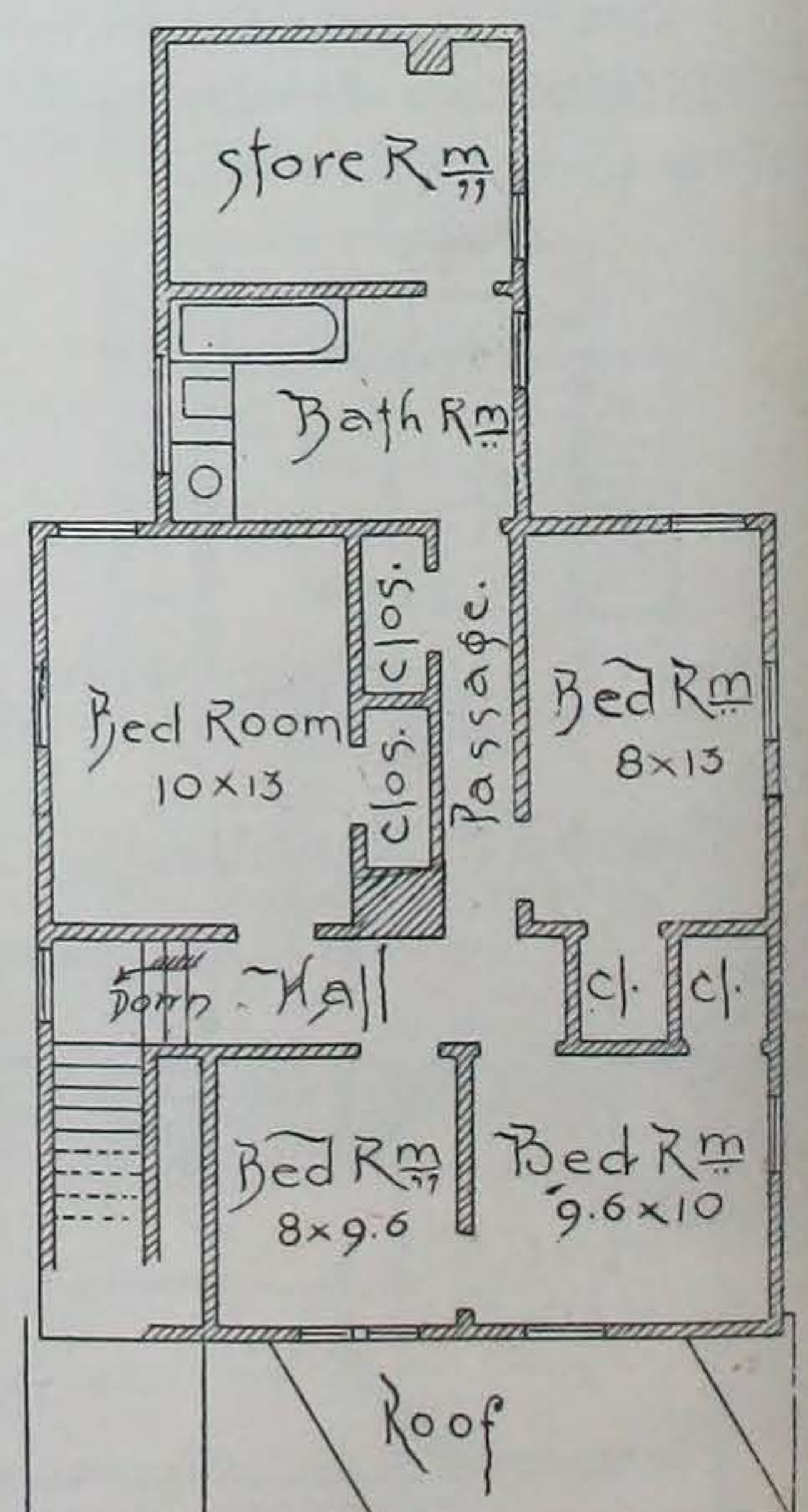
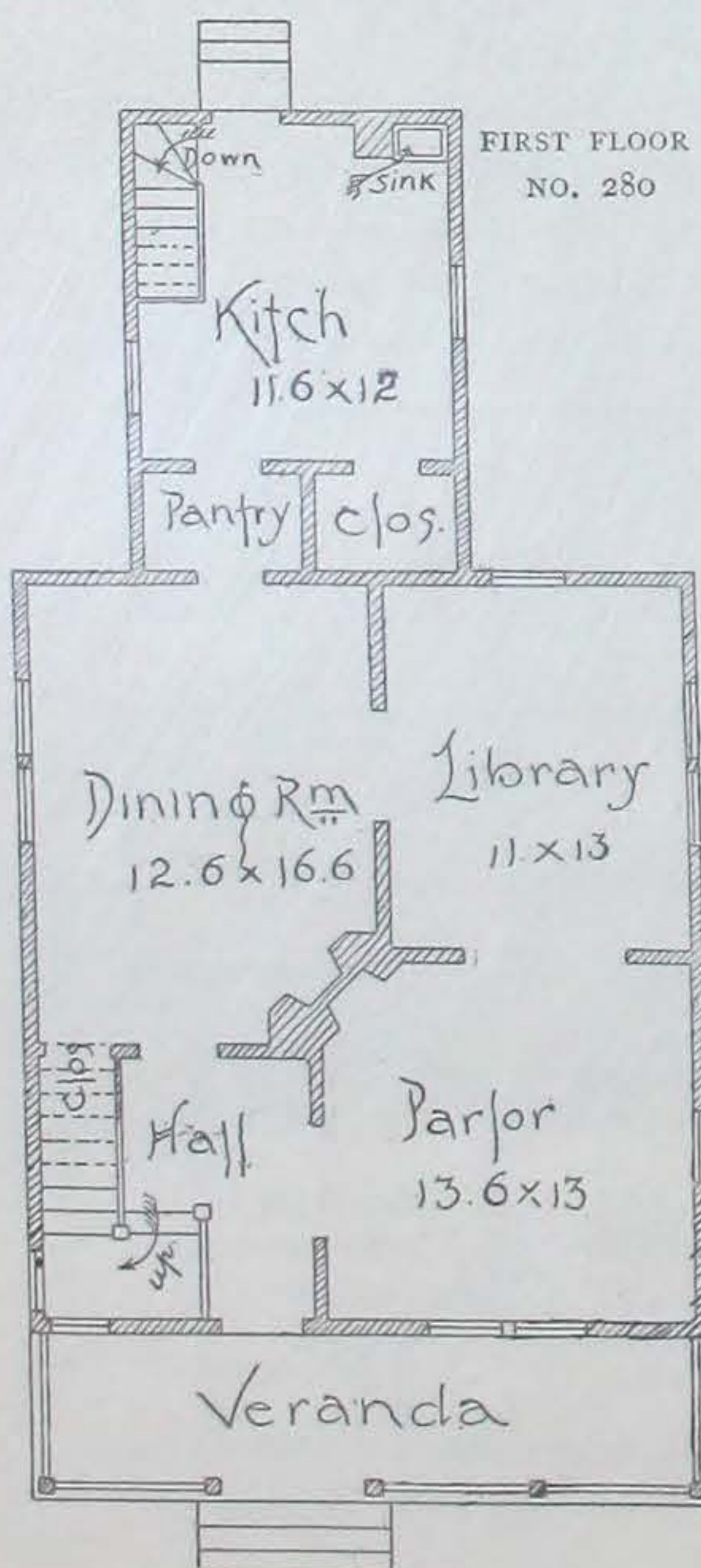
Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

SPECIAL FEATURES.—Cellar under kitchen extension only. Abundant storage-room in the attic, which is reached by a scuttle in the ceiling of second-story hall.

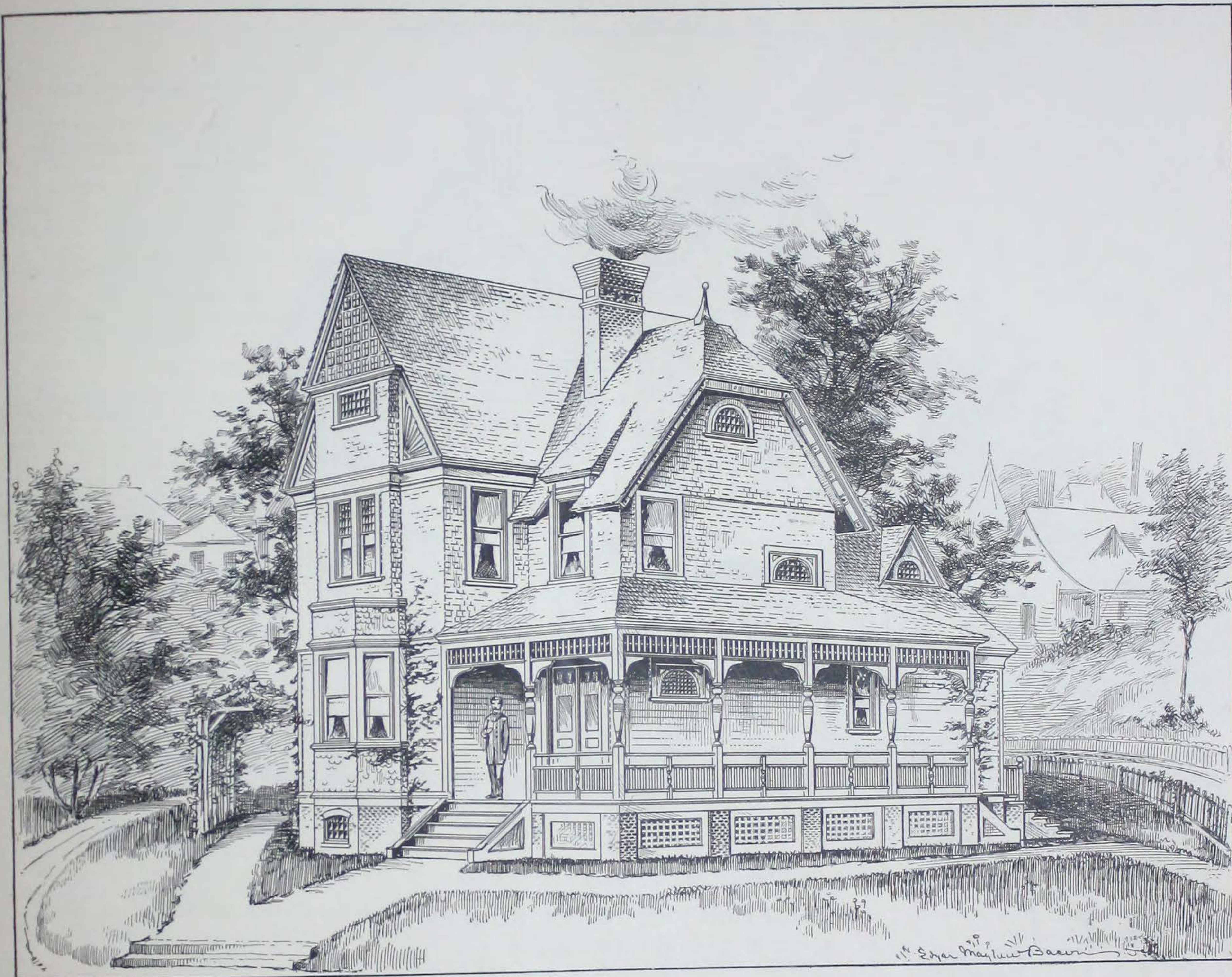
The exterior of this design is considered very attractive.

The stairway is well managed, being well lighted and having easy platforms, economizing space so that a large dining-room is afforded and landing on the second floor so that very little hall-way is necessary.

In our January issue there is a design for a house similar to this, but without kitchen extension, and consequently less expensive.



SECOND FLOOR. NO. 280



DESIGN No. 281. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 281

SIZE OF STRUCTURE: Front, 30 ft., 6 in. Side, 42 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft., 6 in.; Second Story, 8 ft., 6 in.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Gables, shingles and paneling; Roof, shingles.

COST: \$2,500, complete, except mantels.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies

cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

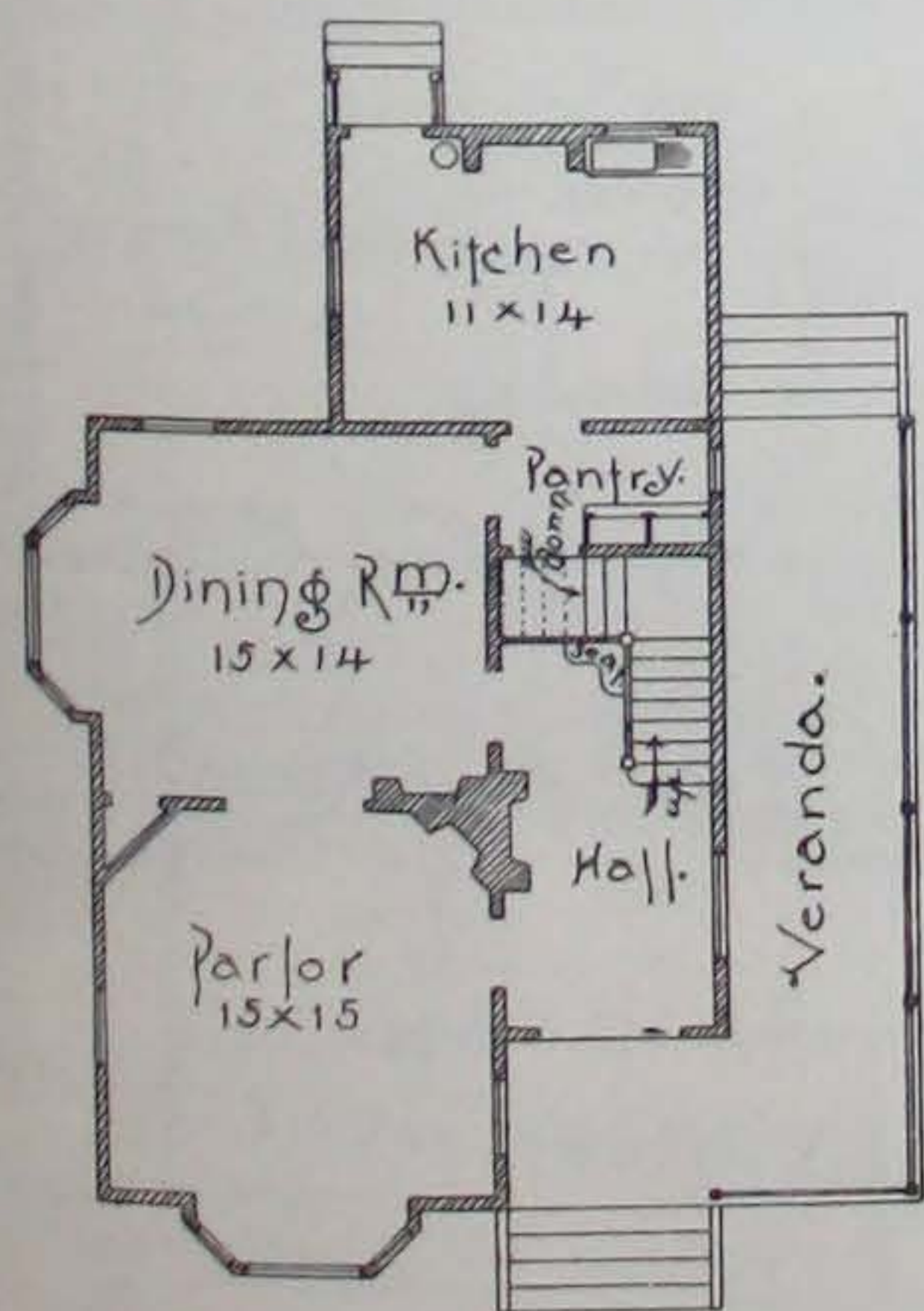
Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

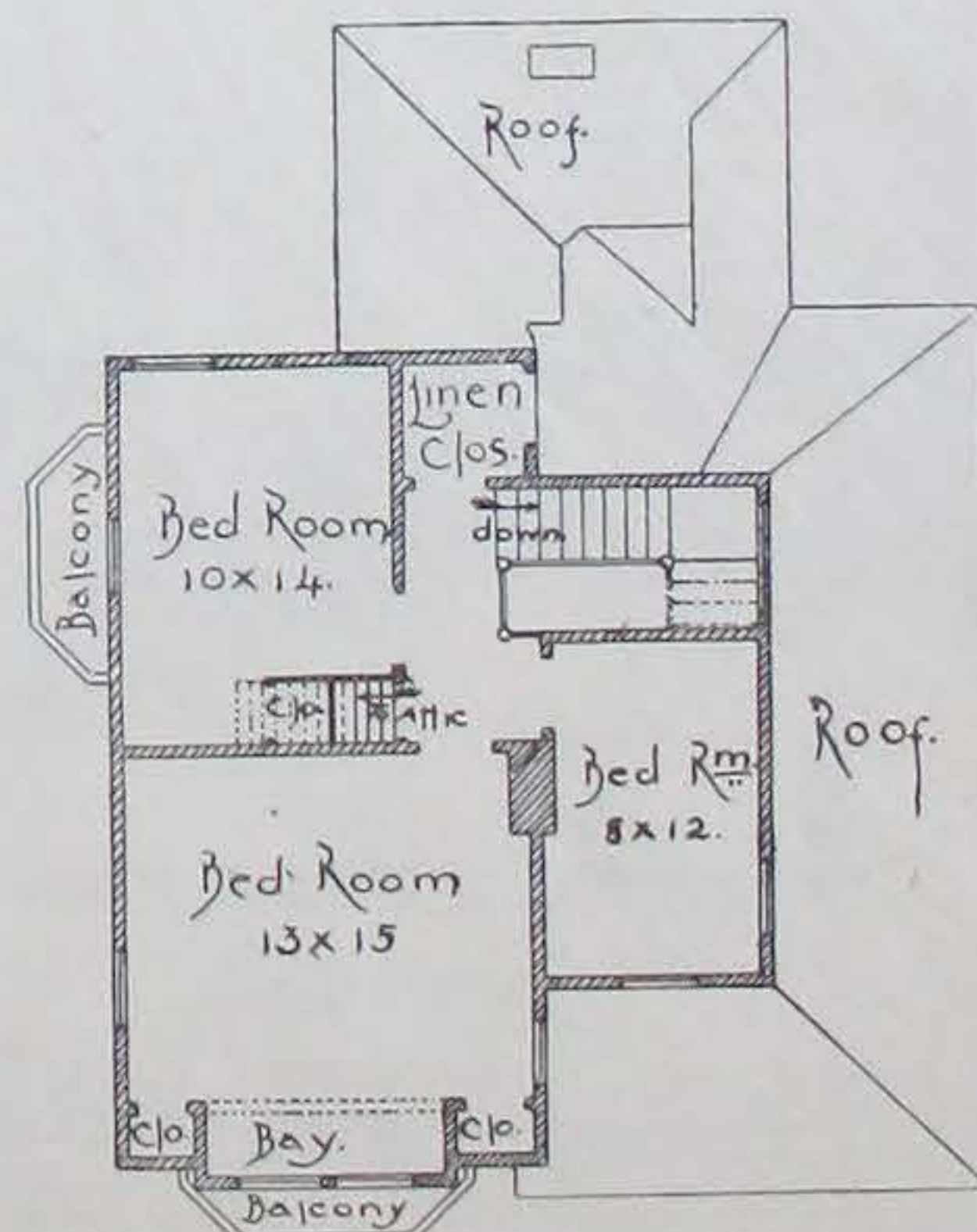
SPECIAL FEATURES.—Cellar under whole house except kitchen extension.

Three rooms in attic if wanted.

This is a capital design for a seaside cottage. If occupied in summer only, no cellar or but a small cellar is needed, and the foundations may be posts or brick piers; and plaster board may be used in place of lath and plaster. These changes would greatly reduce cost.



FIRST FLOOR. NO. 281



SECOND FLOOR. NO. 281



DESIGN No. 282. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 282

SIZE OF STRUCTURE: Front, 24 ft., 6 in. Extreme width, 32 ft., 6 in. Side, 29 ft., 6 in. Extreme depth, 51 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft.; Attic, 7 ft., 6 in.

MATERIALS: Foundation, stone and brick, First Story, clapboards; Second Story, shingles; Gables, half timbered; Roof, shingles.

COST: \$2,800, complete, except furnace and mantels.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

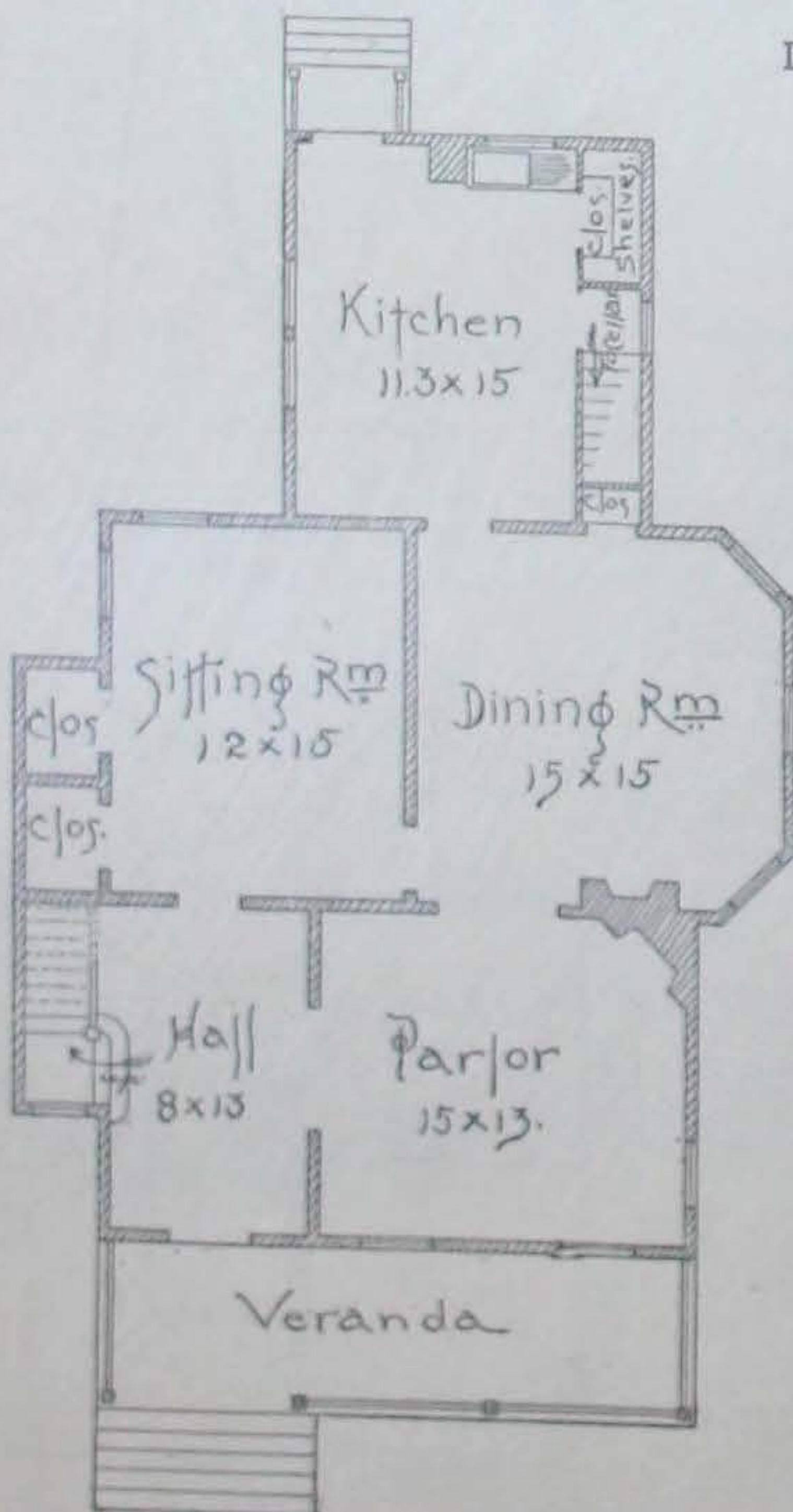
The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

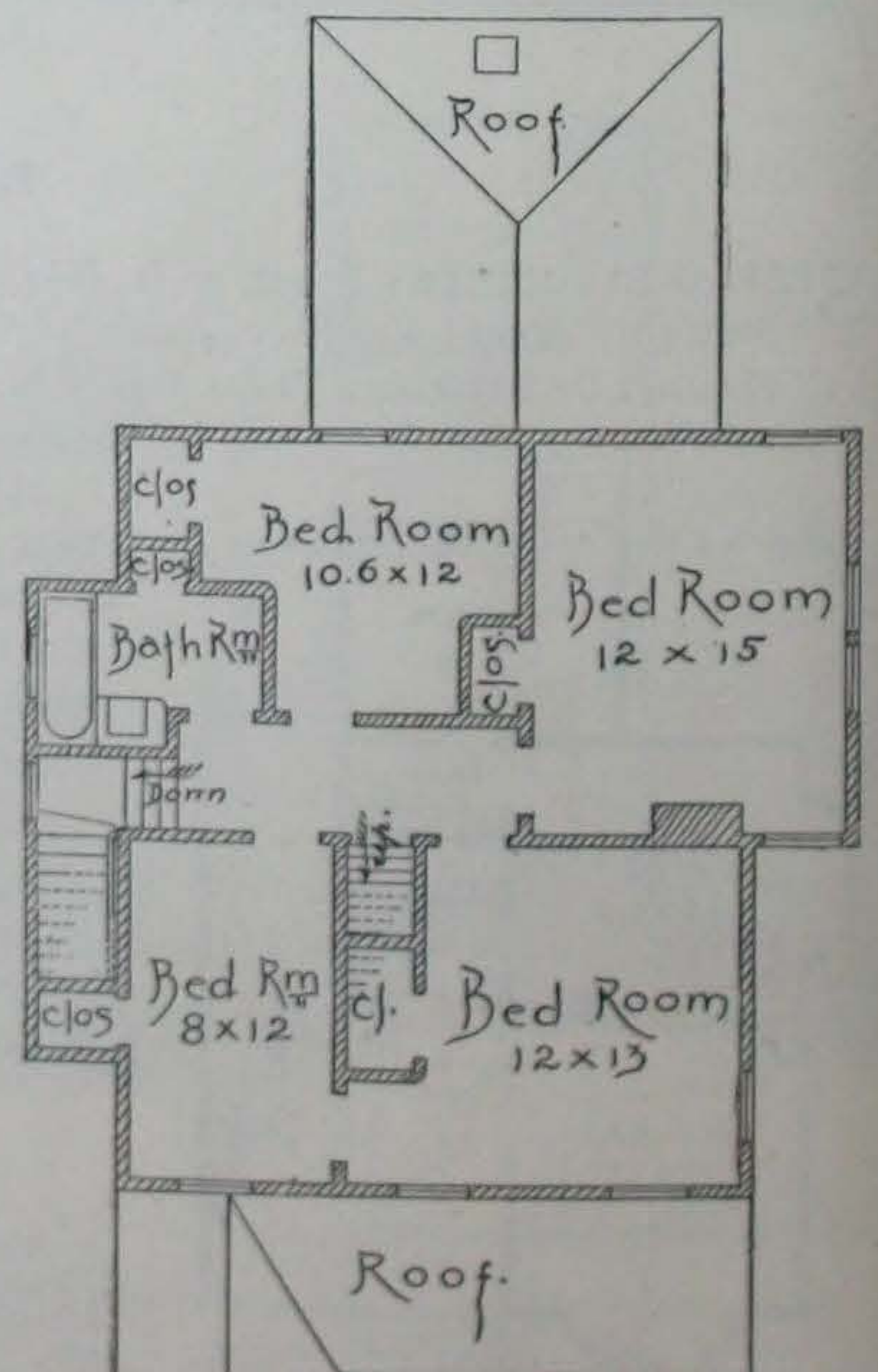
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Cellar under the whole of the main house. Two rooms and storage-room in the attic.

Heated by a furnace in the cellar. Fireplaces in the dining-room and parlor for use in moderate weather.



FIRST FLOOR. NO. 282



SECOND FLOOR. NO. 282

DESCRIPTION OF DESIGN NUMBER 283

SIZE OF STRUCTURE: Front, 24 ft., 6 in.
Extreme width, 31 ft., 10 in. Side, 51 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft., 3 in.;
First Story, 10 ft.; Second Story, 9 ft.

MATERIALS: Foundation, stone; First
Story, clapboards; Second Story, shingles;
Gables, half timbered; Roof, shingles.

COST: \$3,500, complete, except heating
apparatus, kitchen range and mantels.

[See page 75 for information about details,
specifications, bill of quantities and working
plans of this design.]

NOTES

The cost is figured from prices of material and labor
in the neighborhood of New York City, March, 1886. In
most other localities the cost is less—in some places
much less. A different date also modifies cost. The
publishers will be glad to acquaint the intending builder
with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables,
Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c.
(these constitute the principal and distinguishing beauty
of modern houses), are fully shown, on a large scale, in
our Working Drawings, and careful directions for their
execution are given in our Specifications.

This design can be reversed, enlarged, reduced or
altered to suit special wants. The specifications can be
altered, also, to employ different materials that may be
best or cheapest in any locality.

SPECIAL FEATURES.—The exterior ap-
pearance is much like that of the preceding
design Number 282. The plans are reversed.

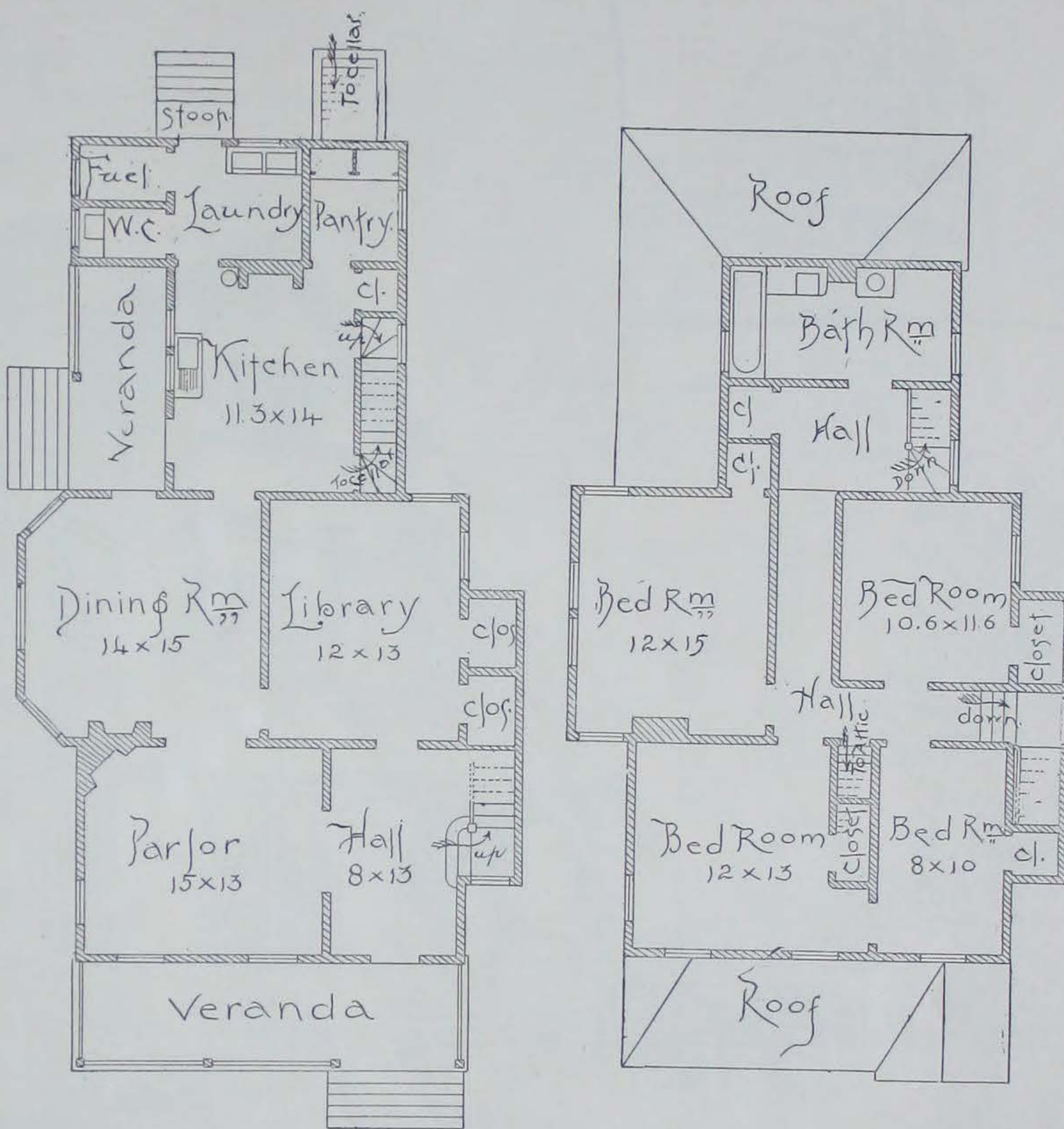
Cellar under the whole house, with both
inside and outside entrances. Two fine bed-
rooms and two trunk closets in the attic.

The bay-window effect in the dining-room
makes this an especially attractive apartment.

The kitchen and laundry arrangements are
particularly meritorious.

Every bed-room has a closet. There is
also a linen closet in the hall.

Steam, furnace, or hot-water apparatus to
be used for heating.



FIRST FLOOR. NO. 283

SECOND FLOOR. NO. 283

DESCRIPTION OF DESIGN NUMBER 284

SIZE OF STRUCTURE: Front, 22 ft. Side, 33 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft., 6 in.;
Second Story, 8 ft., 8 in.; Third Story, 7 ft., 6 in.

MATERIALS: Foundation, brick and stone; First Story, clap-
boards; Second Story, shingles; Gables, half timber and shingles;
Roof, shingles.

COST: \$2,000, complete, except kitchen range and mantels.

[See page 75 for information about details, specifications, bill of
quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of
New York City, March, 1886. In most other localities the cost is less—in some
places much less. A different date also modifies cost. The publishers will be
glad to acquaint the intending builder with this modified cost at any time.

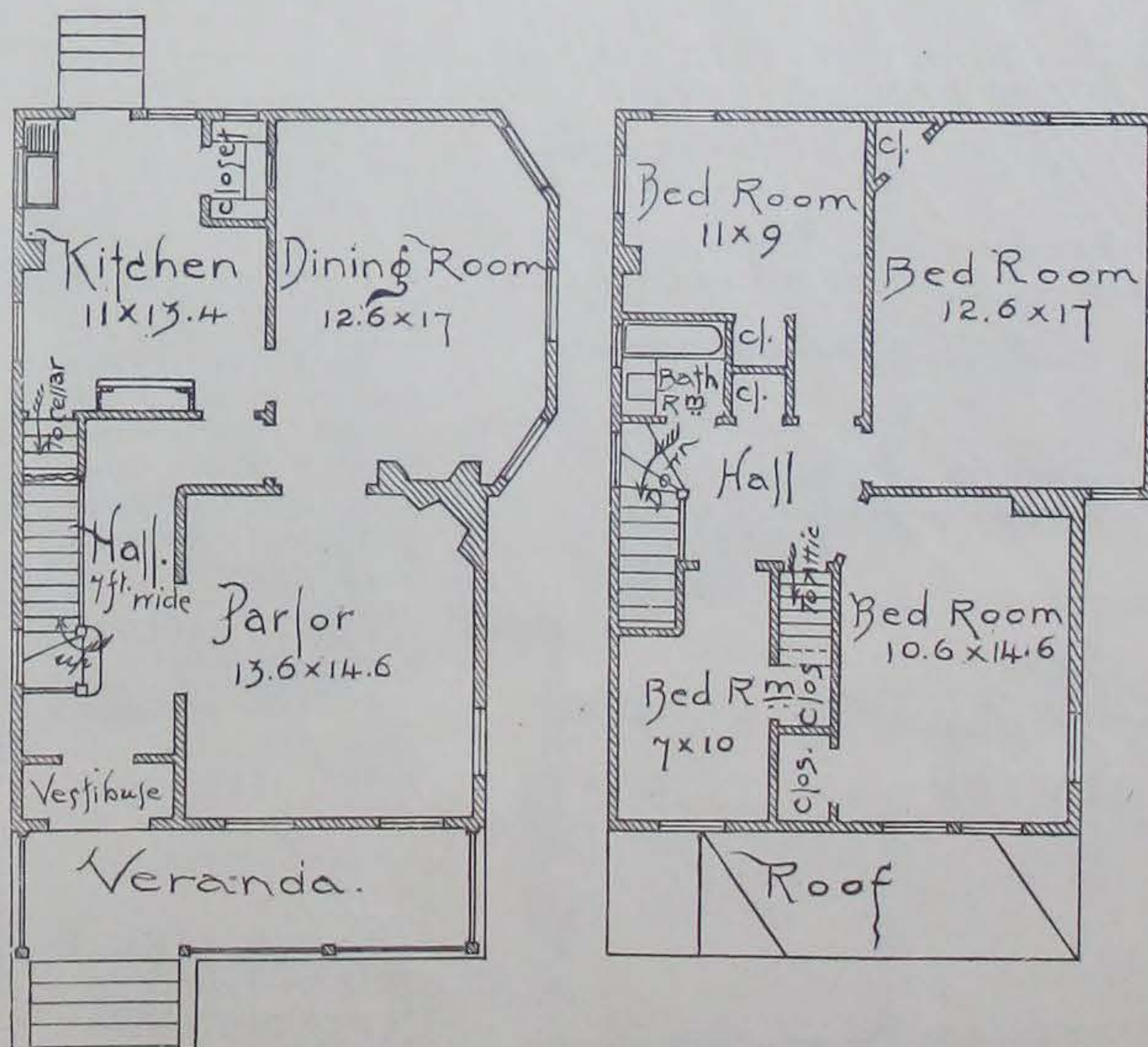
Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase,
Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing
beauty of modern houses), are fully shown, on a large scale, in our Working Draw-
ings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants.
The specifications can be altered, also, to employ different materials that may be
best or cheapest in any locality.

SPECIAL FEATURES.—The exterior is in the same style as
Number 282, shown on the preceding page.

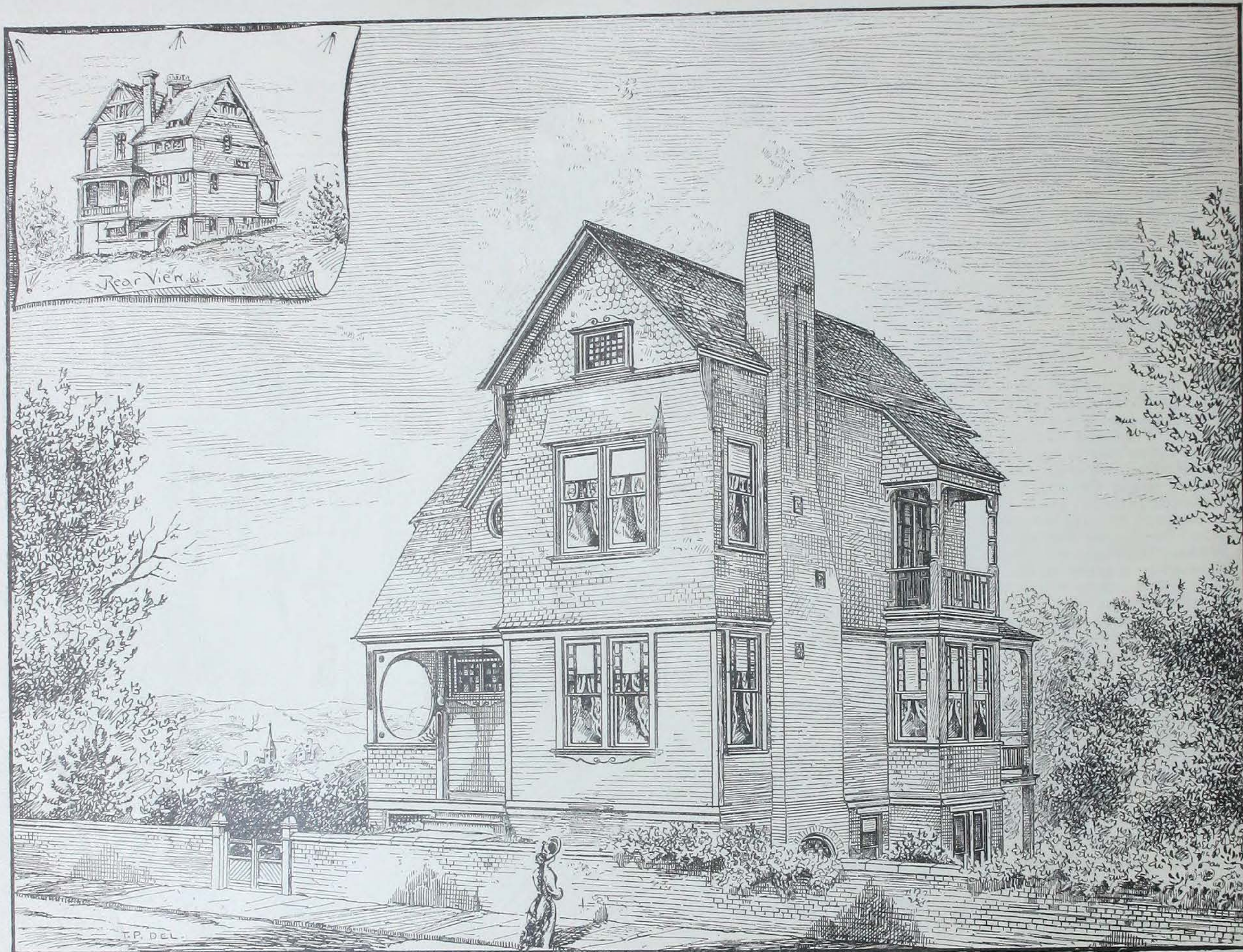
Cellar under the whole house. Two rooms can be finished in
the attic.

This and the two preceding designs are great favorites.



FIRST FLOOR. NO. 284

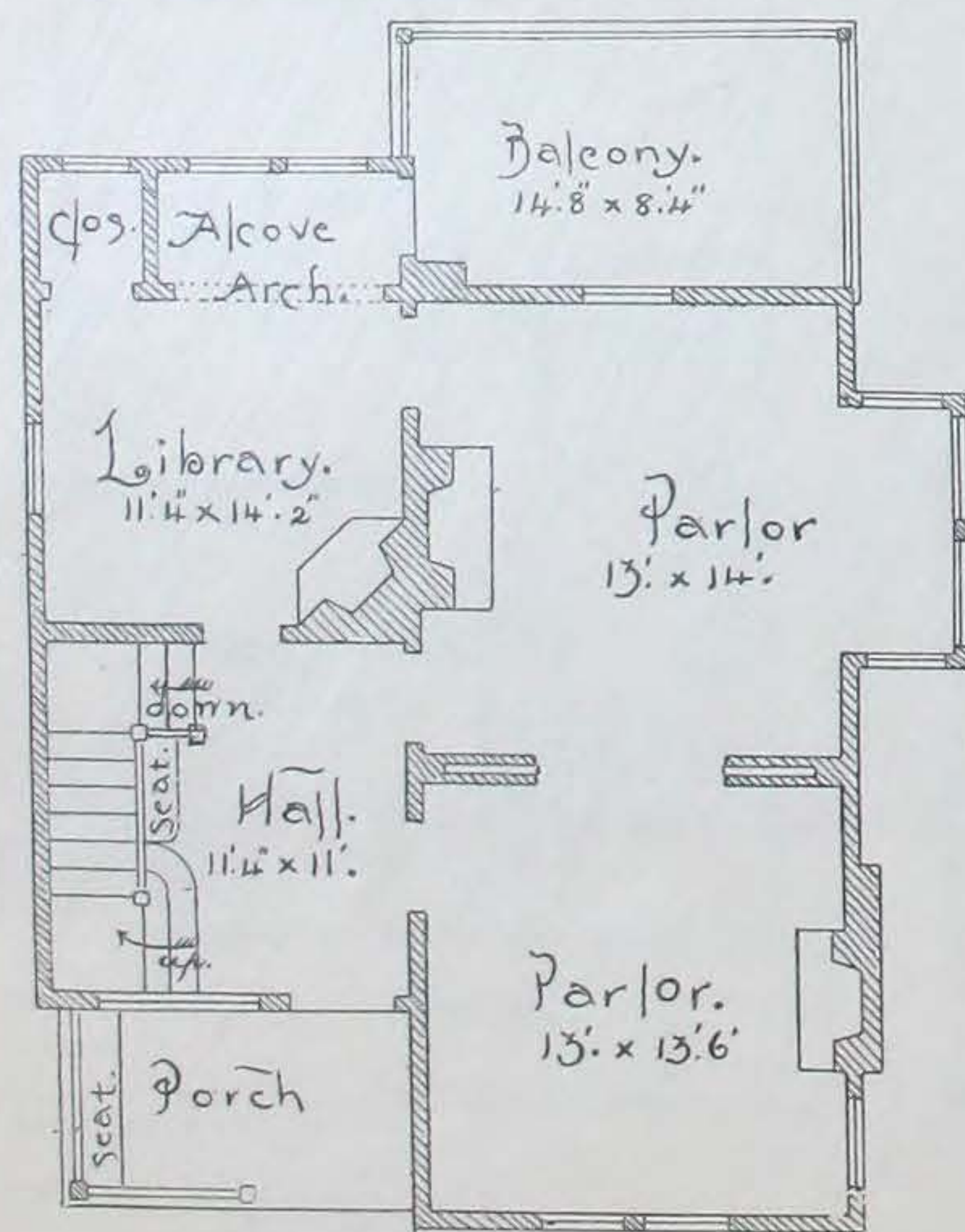
SECOND FLOOR. NO. 284



DESIGN No. 285. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 285

SIZE OF STRUCTURE: Front, 26 ft. Side, 33 ft., 8 in.
 SIZE OF ROOMS: See floor plans.



FIRST FLOOR. NO. 285

HEIGHT OF STORIES: Basement, 8 ft., 2 in.; First Story, 9 ft.; Second Story, 8 ft., 6 in.; Third Story, 7 ft., 6 in.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles; Gables, shingles and half timber; Roof, shingles.

COST: \$2,600, complete.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

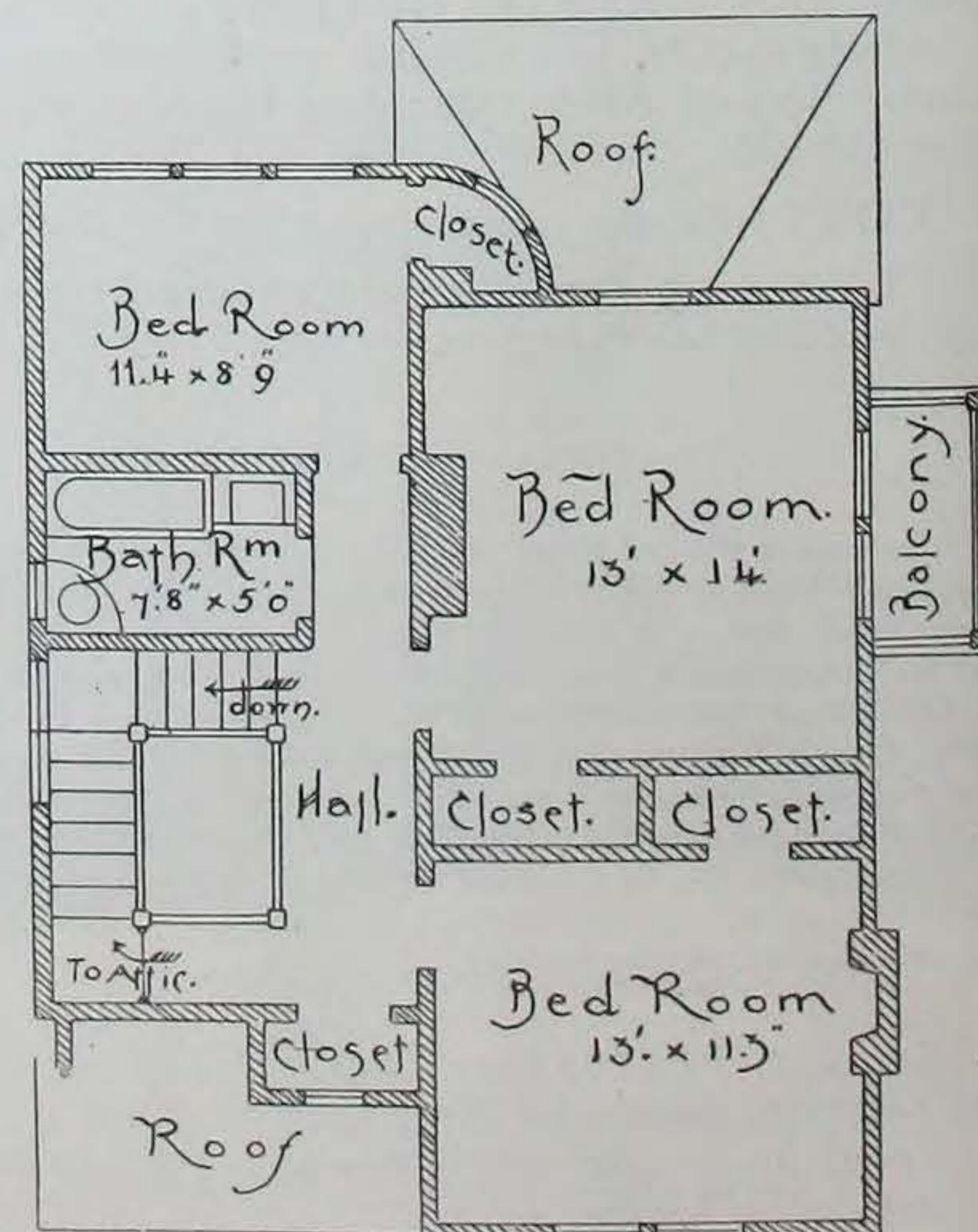
SPECIAL FEATURES.—This design is peculiarly adapted for sloping ground. The dining-room, kit-

chen, servants' bed-rooms, laundry, two store-rooms and a water-closet are in the basement, the dining-room and kitchen being about on the grade level. The house is heated by a furnace located in a sub-cellar, so the basement, as well as the other floors, is well heated.

Three rooms in the attic, besides store-room.

The economy of getting such ample accommodations under one roof and within walls that cover a small area is very apparent.

The plans are compact, well arranged and convenient. The rear balcony, affording a fine view of the Hudson River, where this house was built, is a very comfortable as well as attractive feature.



SECOND FLOOR. NO. 285

DESCRIPTION OF DESIGN NUMBER 286

SIZE OF STRUCTURE: Front, 26 ft. Side, 49 ft., 6 in.
SIZE OF ROOMS: See floor plans.
HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft.; Second Story, 8 ft., 6 in.; Third Story, 7 ft., 6 in.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Gables, half timbered; Roof, shingles.

COST: \$2,800, complete, except furnace, kitchen range and mantels.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

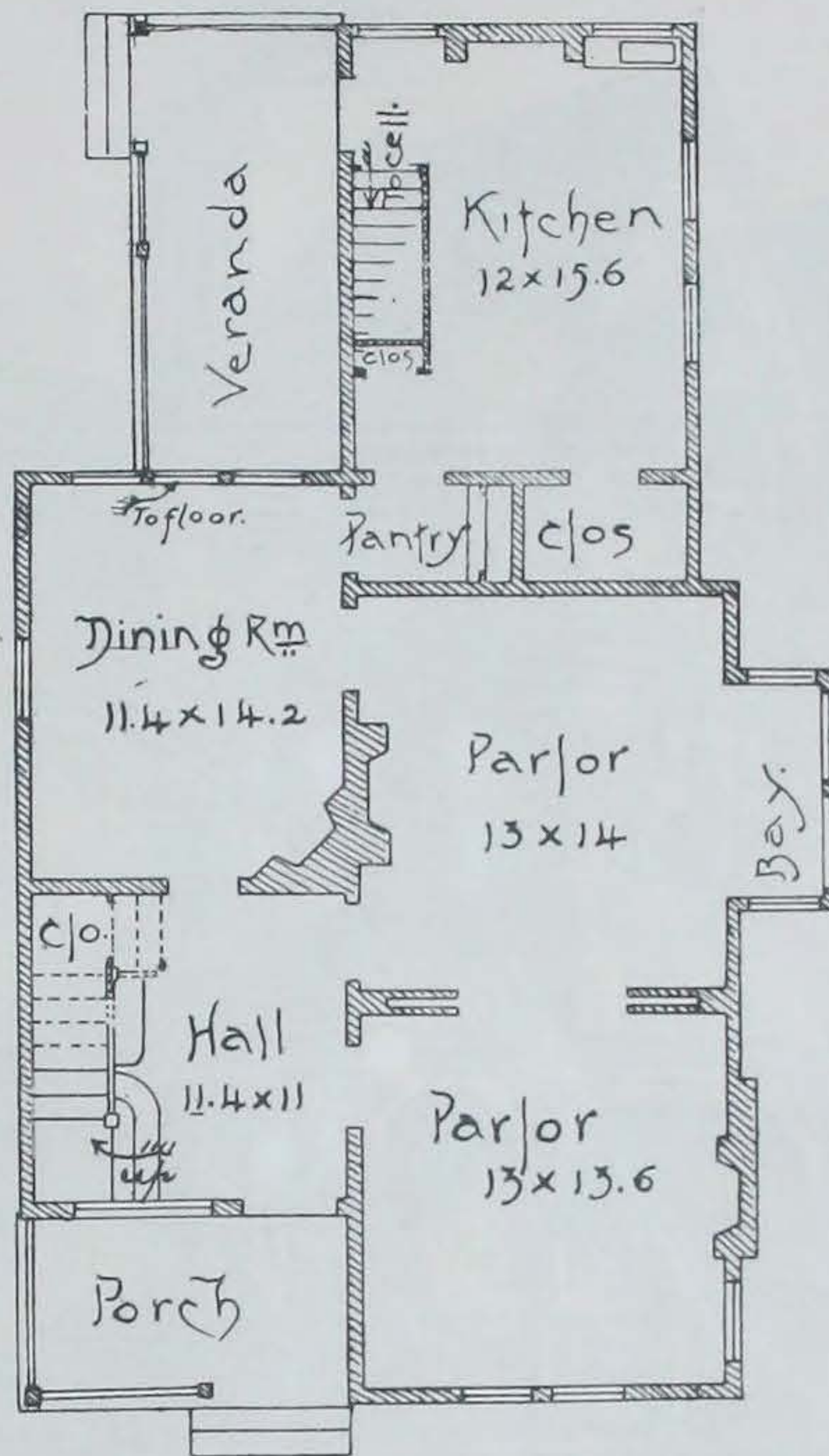
Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

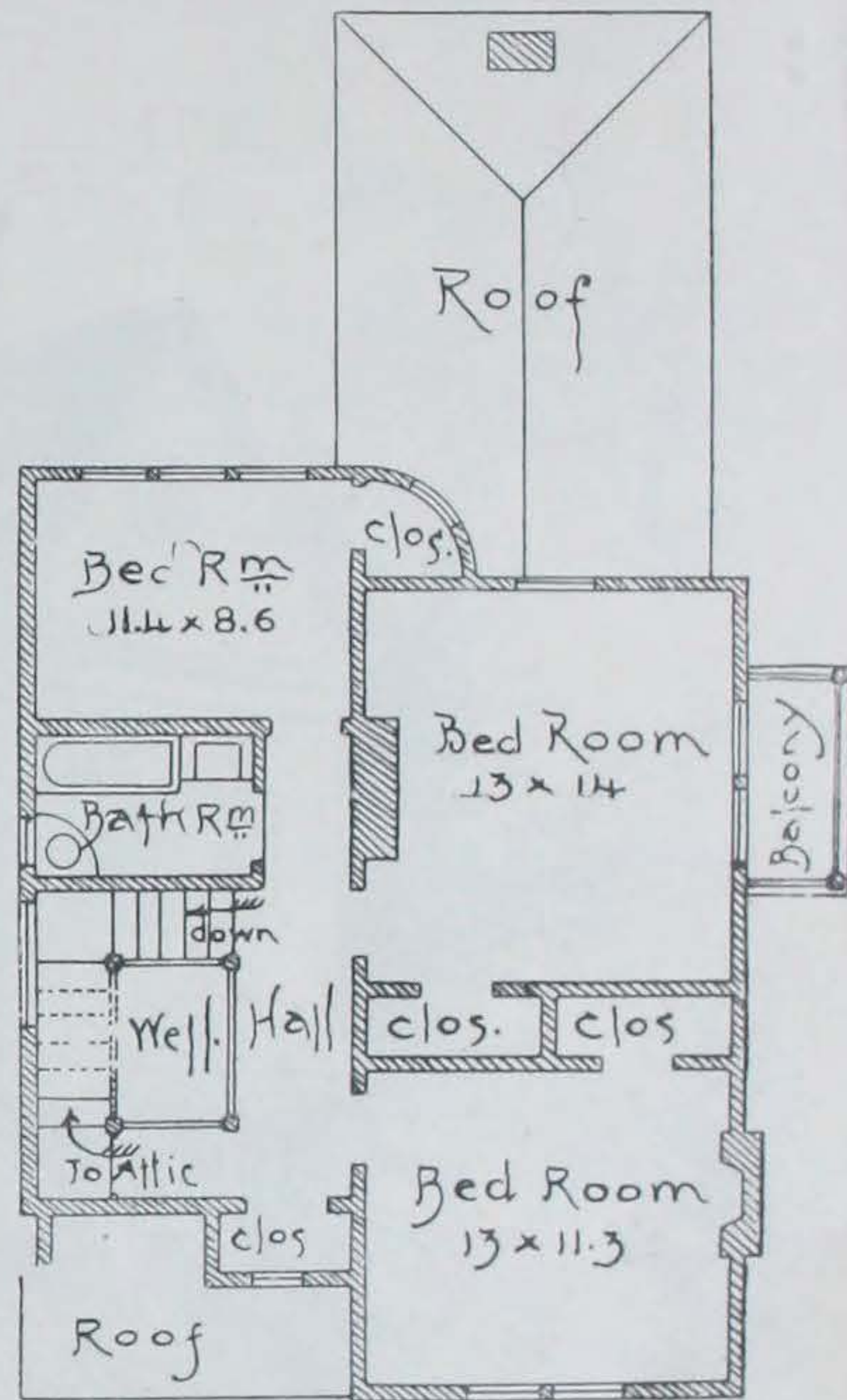
SPECIAL FEATURES.—The exterior appearance the same as the preceding design, Number 285. The plans also are the same, except as they are altered by the addition of a

kitchen extension—a modification that adapts this admirable design for level ground.

Cellar under the kitchen extension and half of the main house.



FIRST FLOOR. NO. 286



SECOND FLOOR. NO. 286

DESCRIPTION OF DESIGN NUMBER 287

SIZE OF STRUCTURE: Front, 36 ft., 6 in. Side, 49 ft., 6 in.
SIZE OF ROOMS: See floor plans.
HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft.; Second Story, 8 ft., 6 in.; Third Story, 7 ft., 6 in.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Gables, half timbered; Roof, shingles.

COST: \$3,000, complete, except furnace, kitchen range and mantels.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

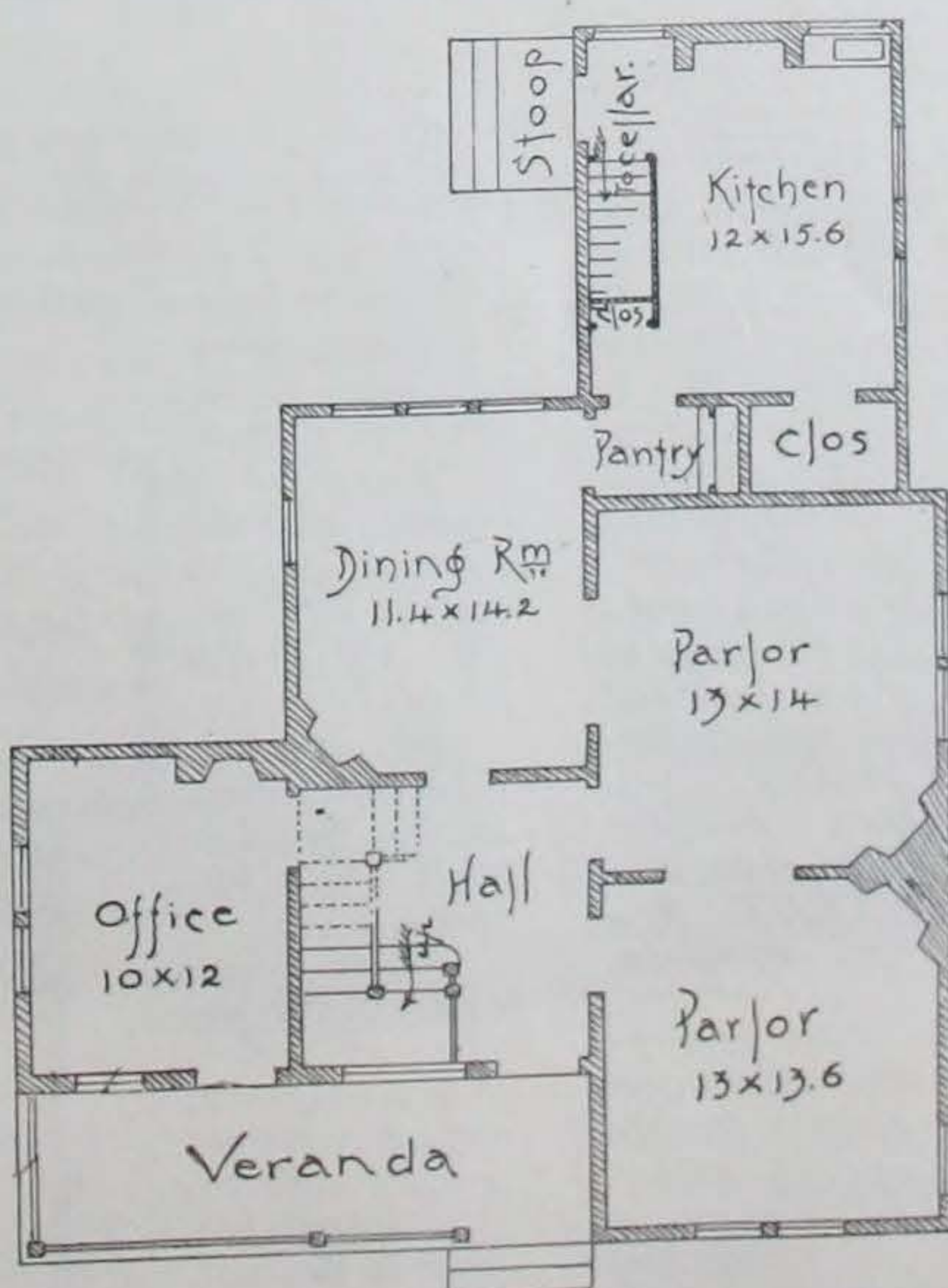
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Another modification of Number 285.

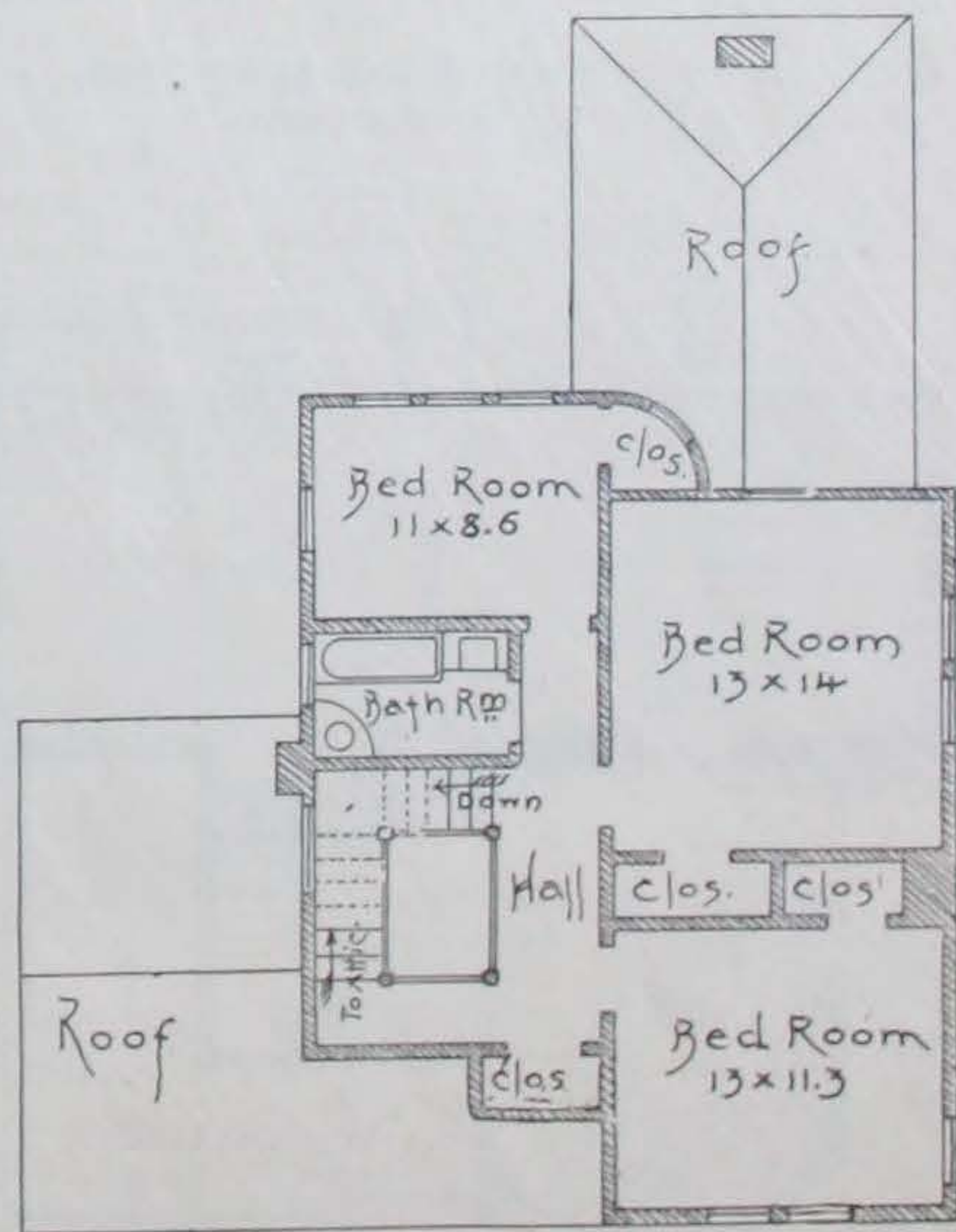
Beside the kitchen extension, a side wing is added, which provides a suit-

able office for a doctor or a lawyer, with access from the street and also from the main house.

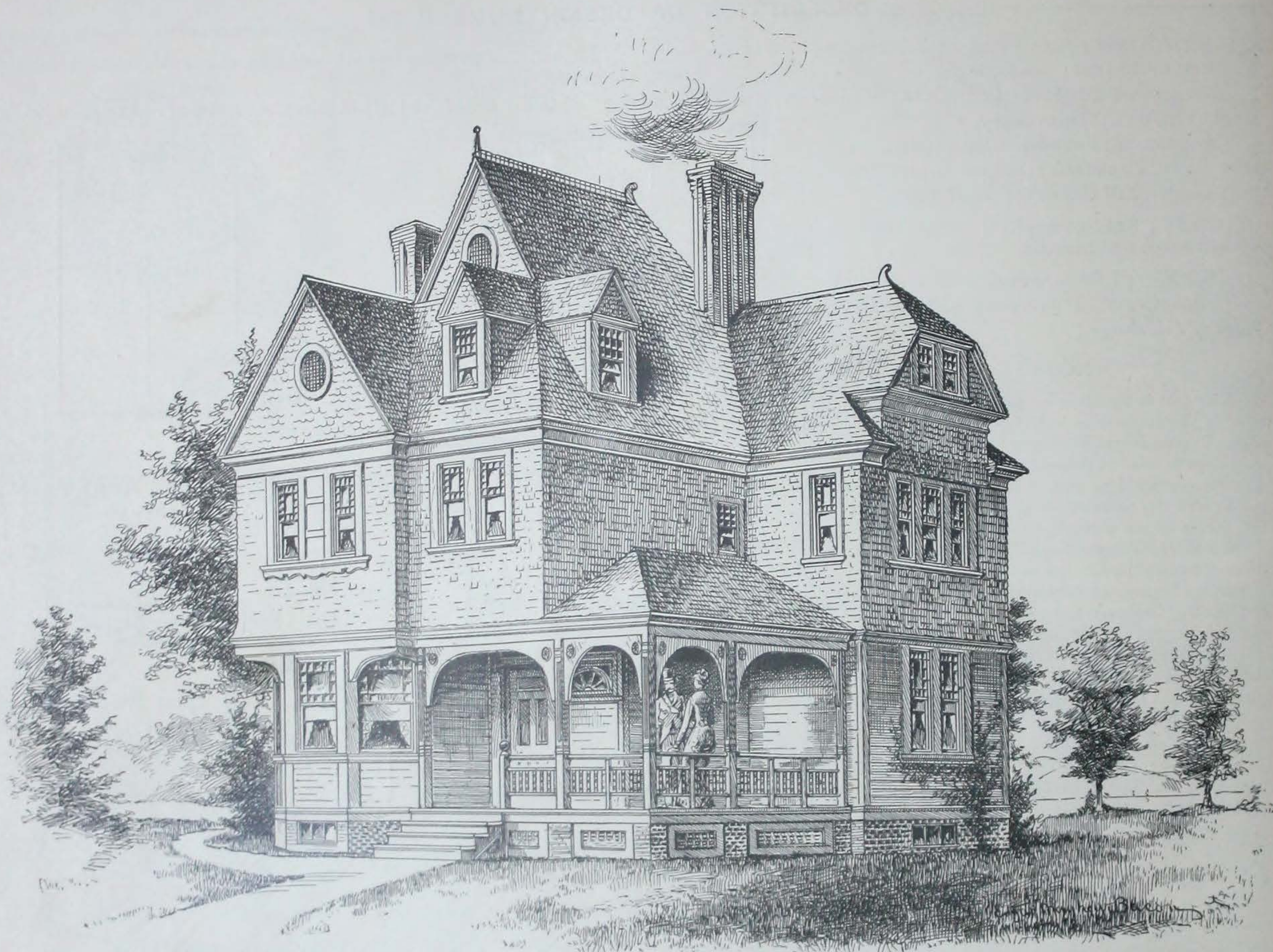
Cellar under the kitchen and half of the house. Three rooms in the attic.



FIRST FLOOR. NO. 287



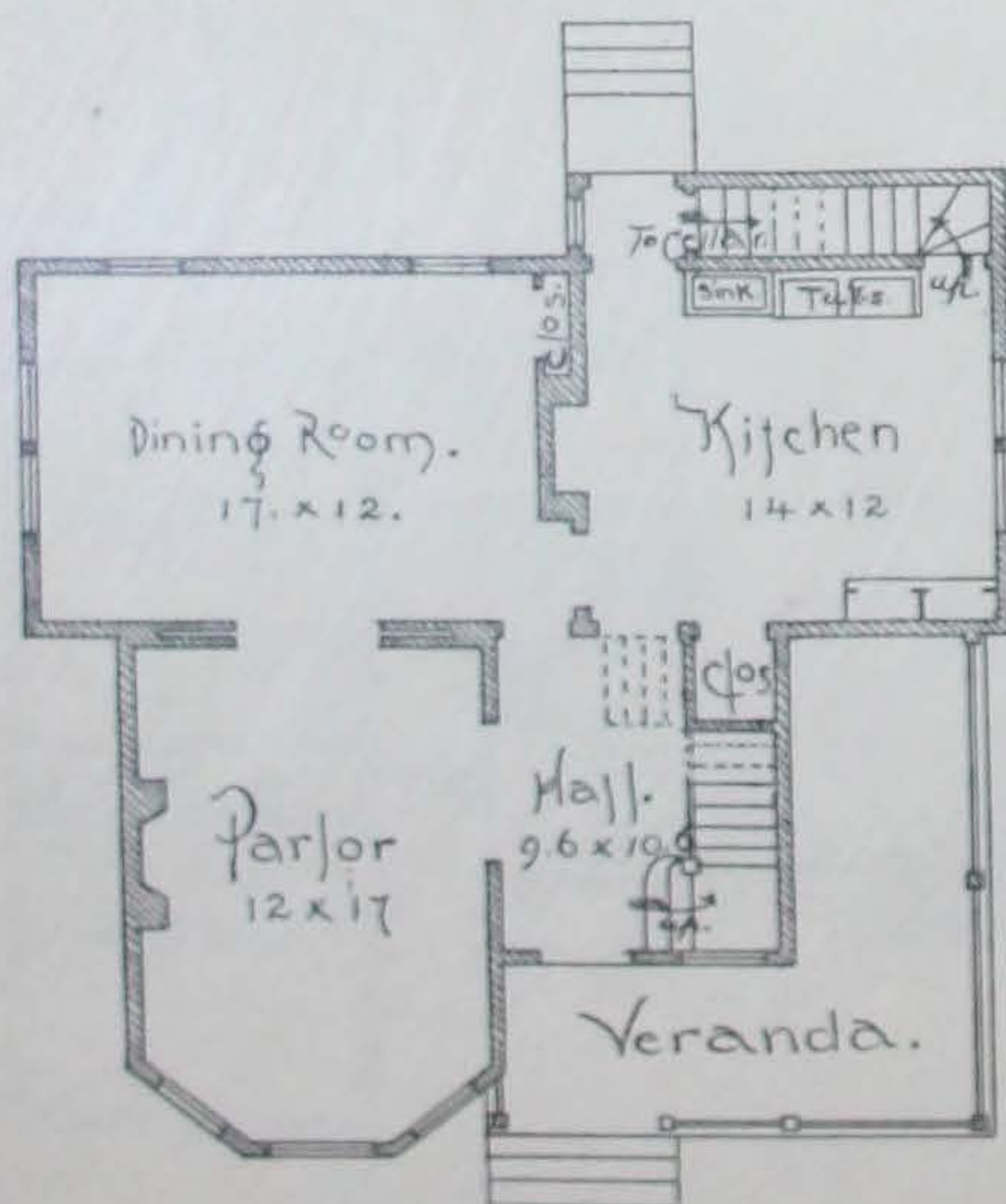
SECOND FLOOR. NO. 287



DESIGN No. 288. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 288

SIZE OF STRUCTURE: Front, 34 ft. Side, 33 ft.
 SIZE OF ROOMS: See floor plans.



FIRST FLOOR. NO. 288

HEIGHT OF STORIES: Cel-
 lar, 7 ft.; First
 Story, 9 ft., 6
 in.; Second
 Story, 8 ft., 6
 in.; Third Sto-
 ry, 7 ft., 10 in.

MATERIALS :
 Foundation,
 brick and stone;
 First Story,
 clapboards;
 Second Story,
 shingles; Ga-
 bles, shingles;
 Roof, shingles.

COST : \$3,7-
 200, complete,
 except furnace.

[See page 75
 for information
 about details,
 specifications,
 bill of quantities
 and working
 plans of this de-
 sign.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost.

SPECIAL FEATURES.—Cellar under the whole house.

Four bed-rooms in the attic.

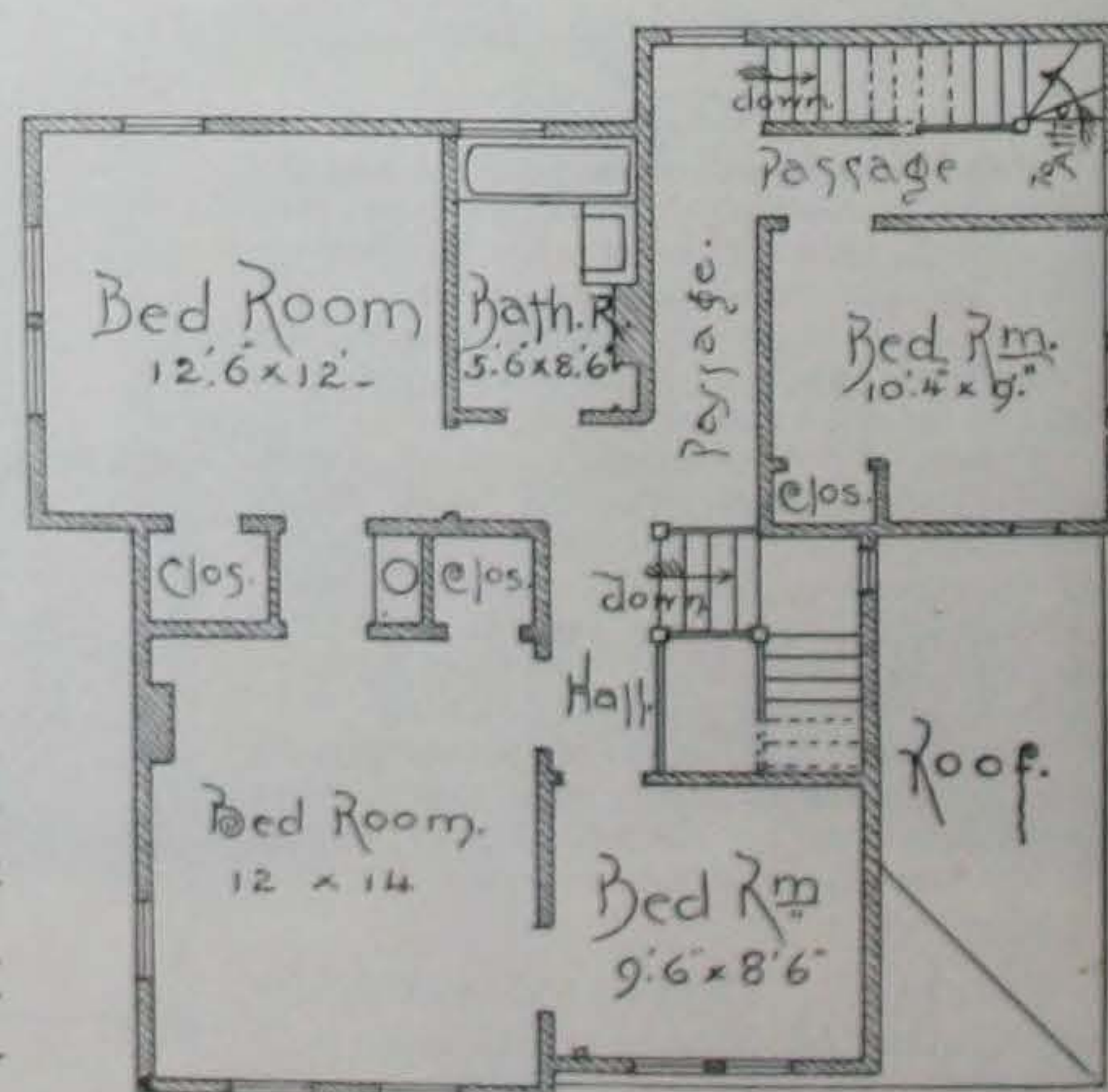
Sliding doors
 between parlor
 and dining-room.

The back
 stairway and the
 passage on the
 second floor are
 very well man-
 aged.

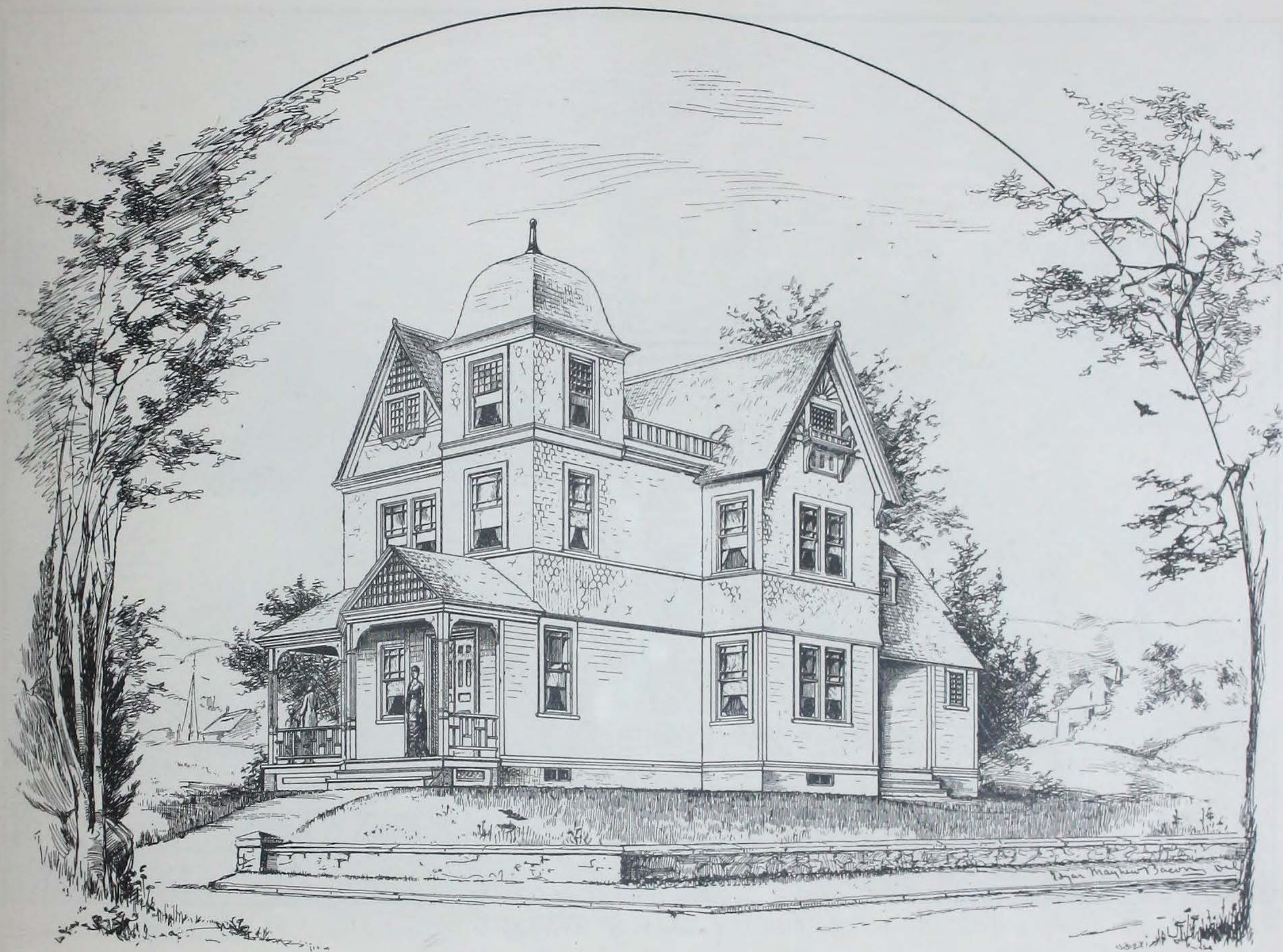
But one fire-
 place is provided,
 as this house is
 heated by a fur-
 nace.

There is no
 waste in this de-
 sign; no useless
 ornamentation,
 and every inch of
 space is utilized.

The large bay
 front in the par-
 lor is an attrac-
 tive feature.



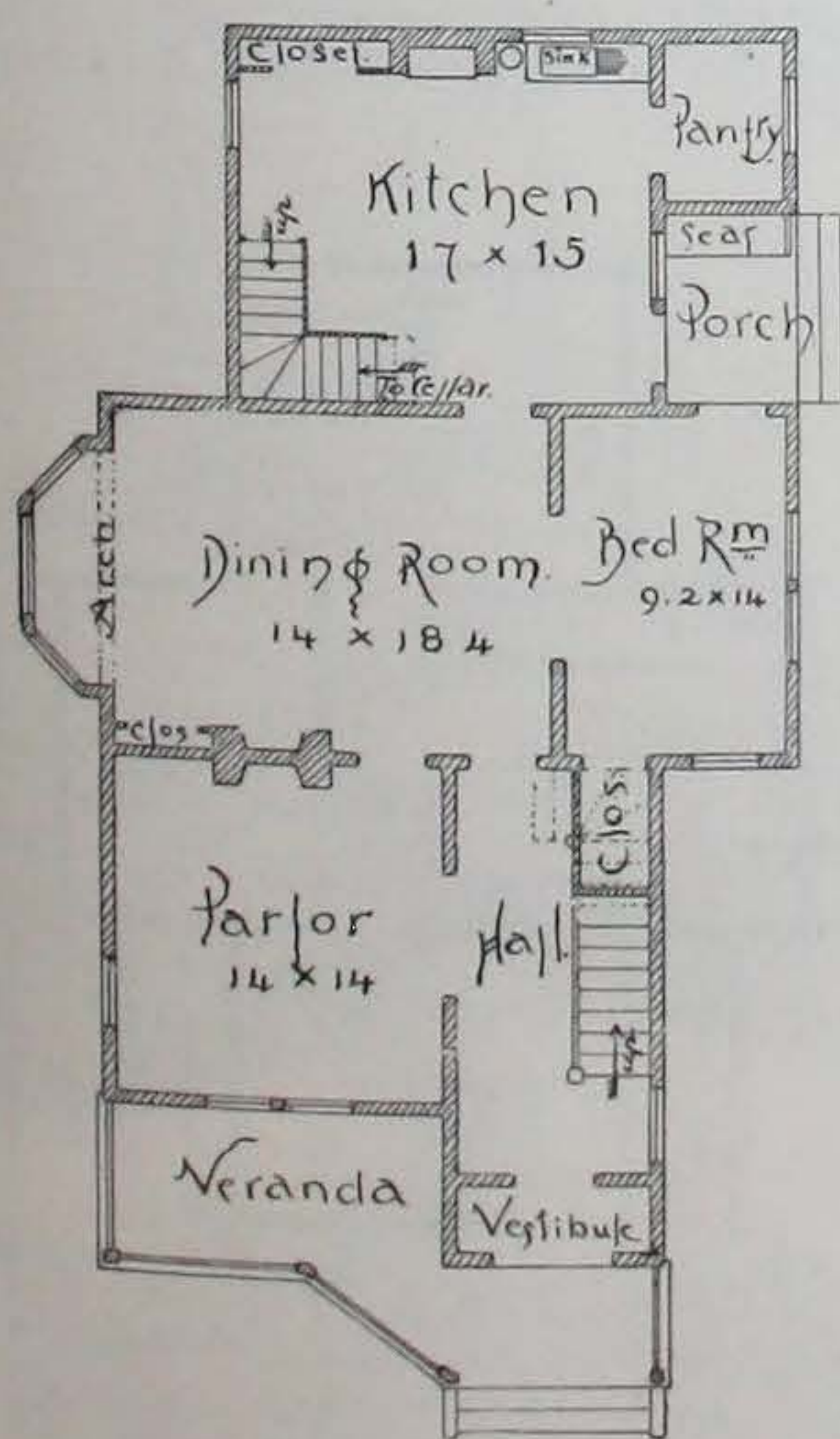
SECOND FLOOR. NO. 288



DESIGN No. 289. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 289

SIZE OF STRUCTURE: Front, 23 ft., 6 in. Side, 51 ft., 4 in.
 SIZE OF ROOMS: See floor plans.



FIRST FLOOR. NO. 289

HEIGHT OF STORIES: Cellar, 6 ft., 10 in.; First Story, 10 ft.; Second Story, 9 ft., 6 in.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Gables, half timbered and shingled; Roof, shingles.

COST: \$3,500, complete, except furnace.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The

publishers will be glad to acquaint the intending builder with this modified cost at any time.

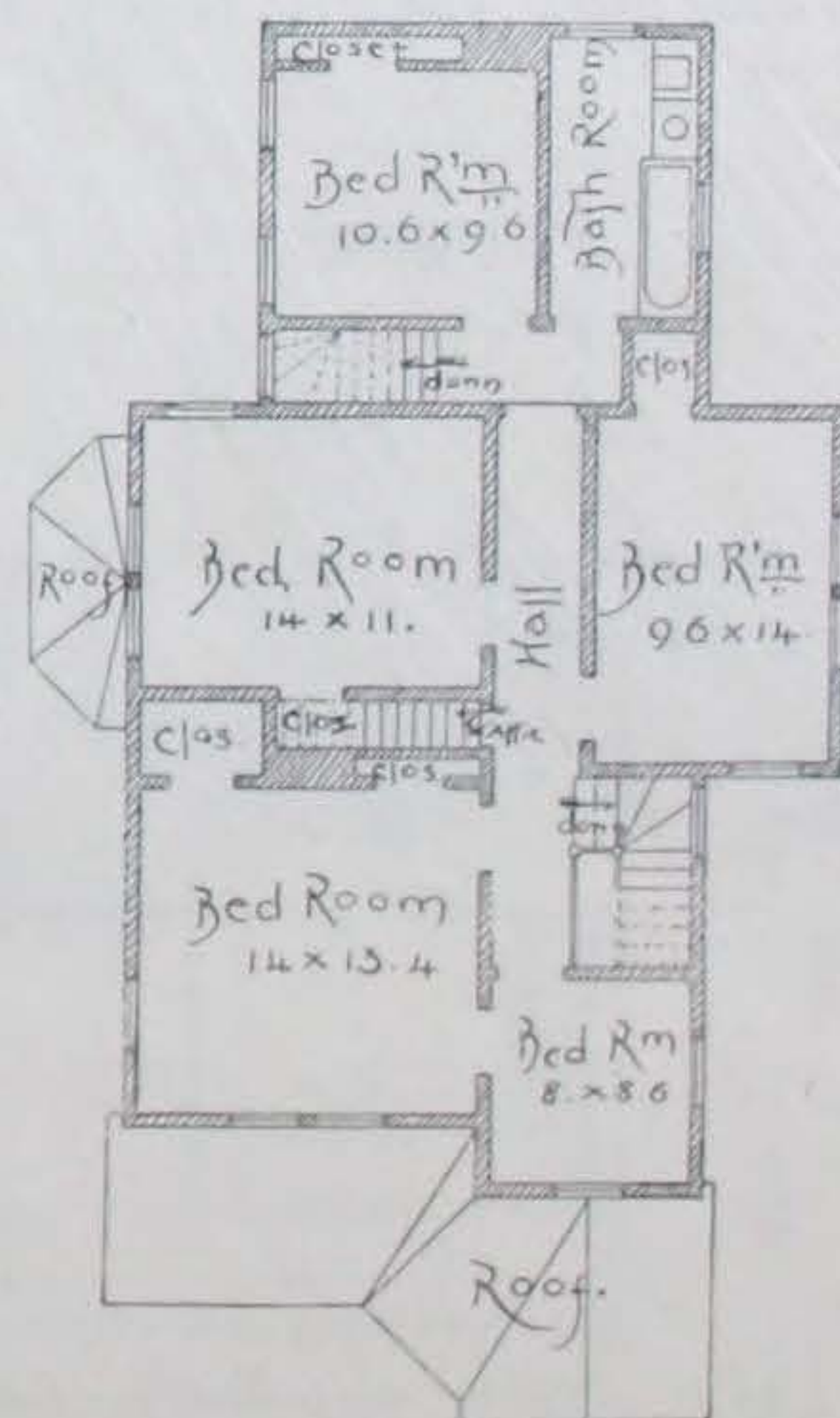
Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Cellar under the extension only.

No rooms are finished in attic, but there are three available in the space, beside the tower-room, at no great cost.

This design makes a very good parsonage, the bed-room on the first floor being used for a study.



SECOND FLOOR. NO. 289



DESIGN No. 290. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 290

SIZE OF STRUCTURE: Front, 31 ft., 6 in. Side, 40 ft., 8 in., including veranda, 48 ft., 2 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft.

MATERIALS: Foundation, brick piers; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$3,000.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

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Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit

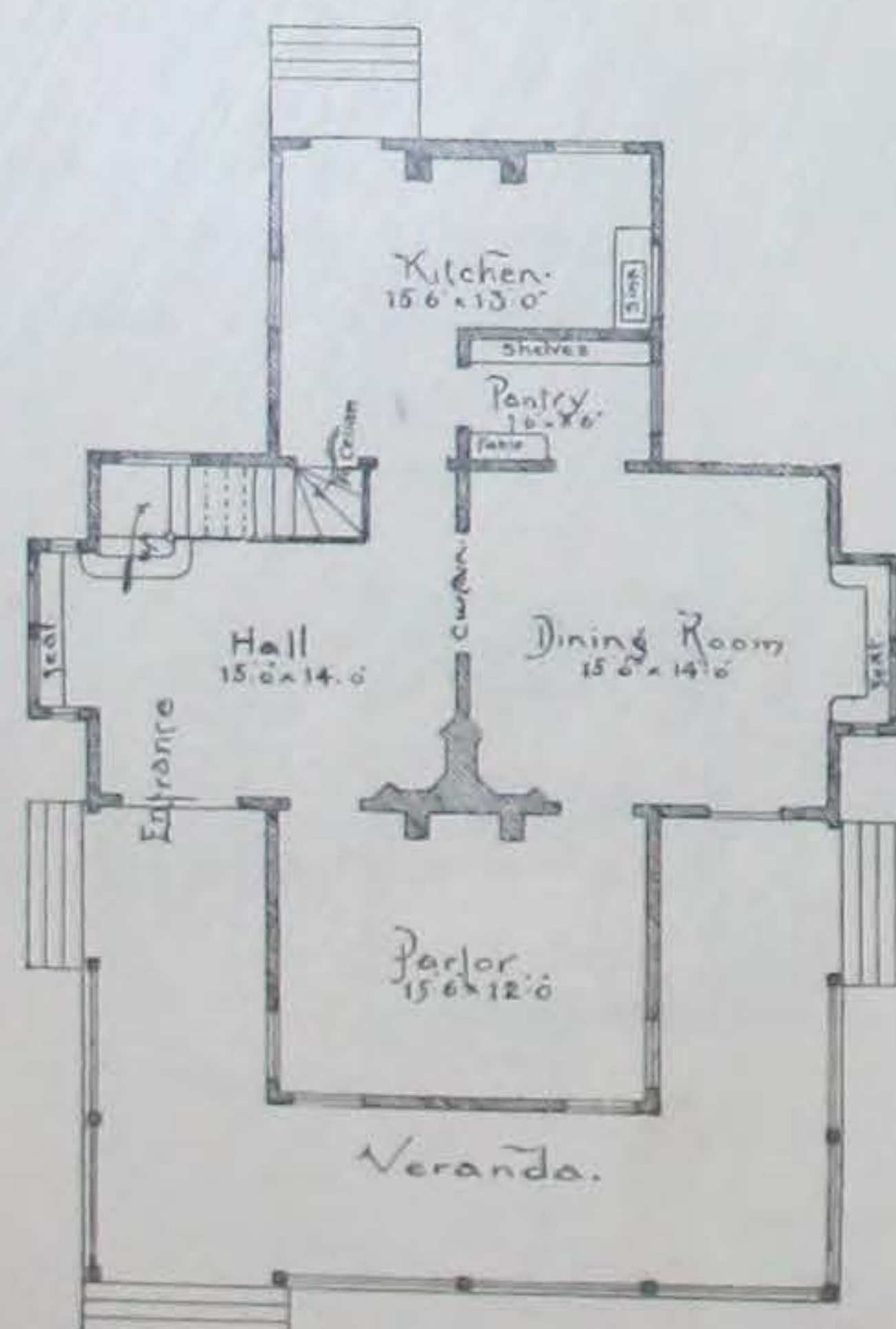
special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Cellar under the kitchen and pantry only. It is probably well known to readers of this publication that cellars are not built so large as formerly. There is now much less use for cellar-room, as the butcher and greengrocer supply our daily wants, and the householder is no longer the small farmer and dairyman that he used to be.

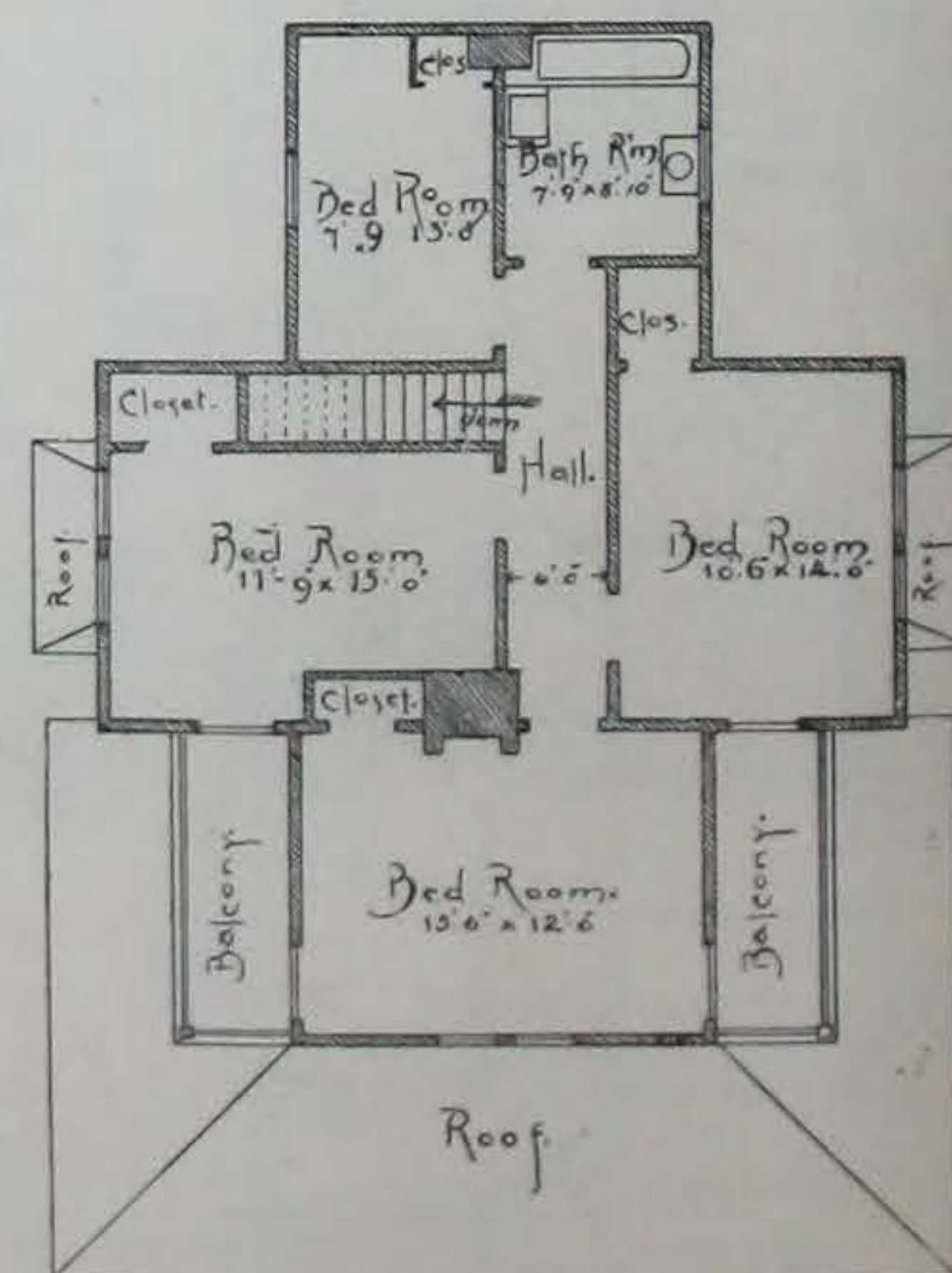
This is really an admirable design for a country cottage, both in arrangement and appearance; the ample veranda and balconies, the beautiful hall and staircase, the seats in the bay-windows, the fireplaces, all are fine features.

The general character of this design is Swiss, but modified and refined in detail in accordance with modern taste and ideas. The hanging balconies of second story, protected by the broad overhanging roof, afford very pleasant retreats during summer weather.

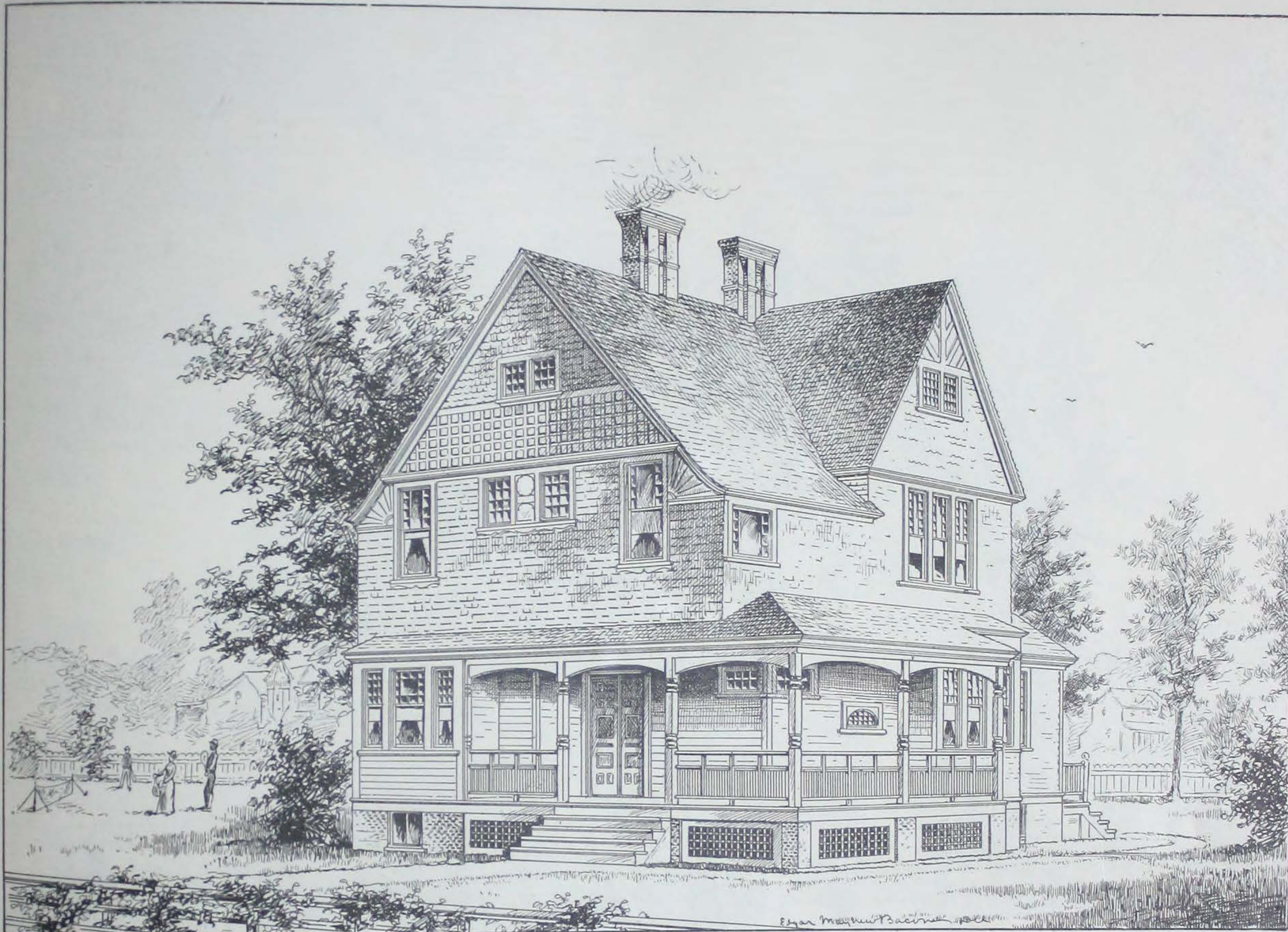
It is a matter of surprise that the Swiss style of cottage is neglected. We have noticed, however, that when a client does build a cottage in this style he is warm and enthusiastic in its praise.



FIRST FLOOR. NO. 290



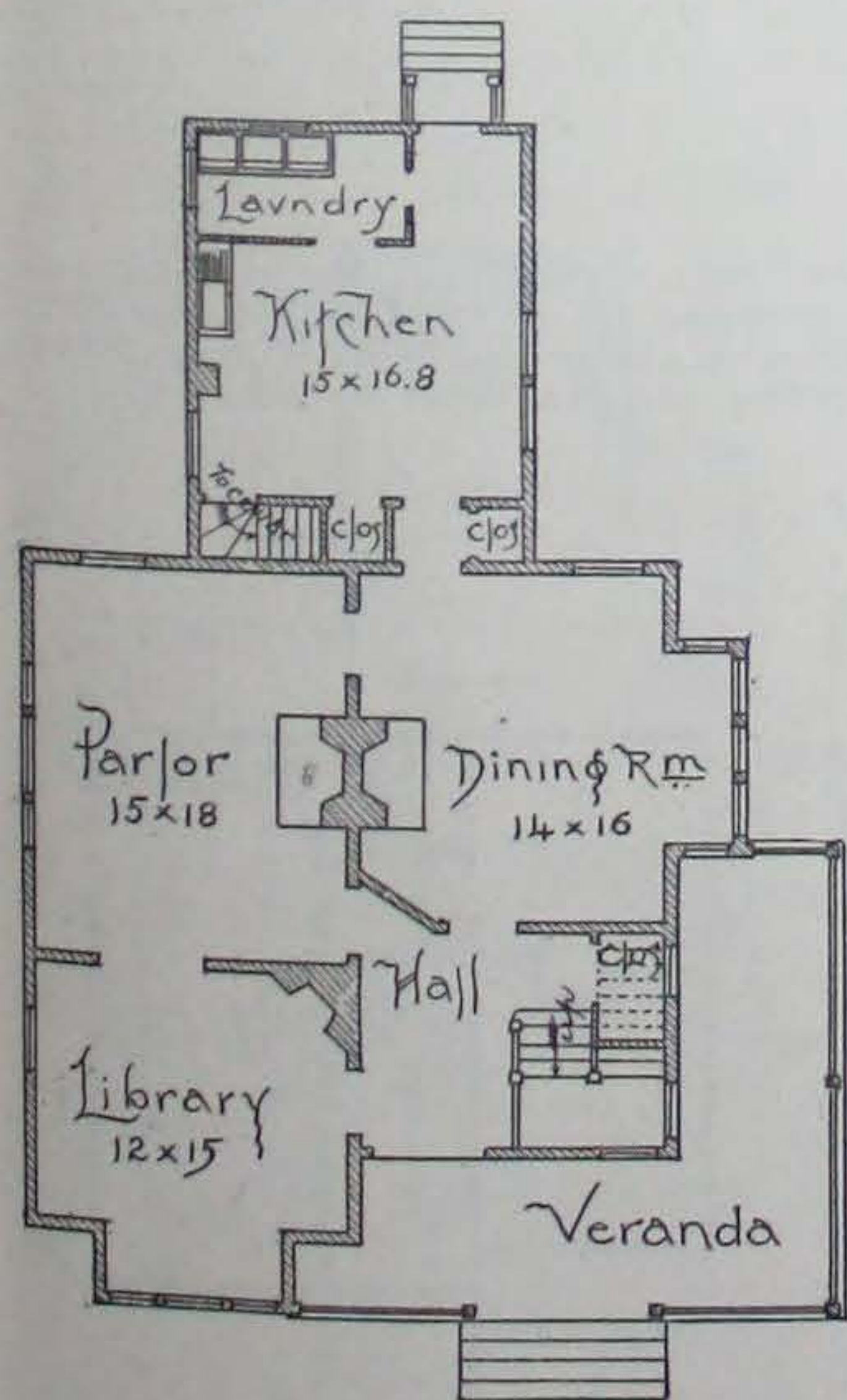
SECOND FLOOR. NO. 290



DESIGN No. 291. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 291

SIZE OF STRUCTURE: Front, 30 ft., 6 in. Side, 31 ft., 6 in.; including extension, 51 ft., 6 in.



FIRST FLOOR. NO. 291

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft., 6 in.; Third Story, 7 ft., 8 in.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Gables, panels and shingles; Roof, shingles.

COST: \$3,000, complete, except furnace, kitchen range and mantels.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most

other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

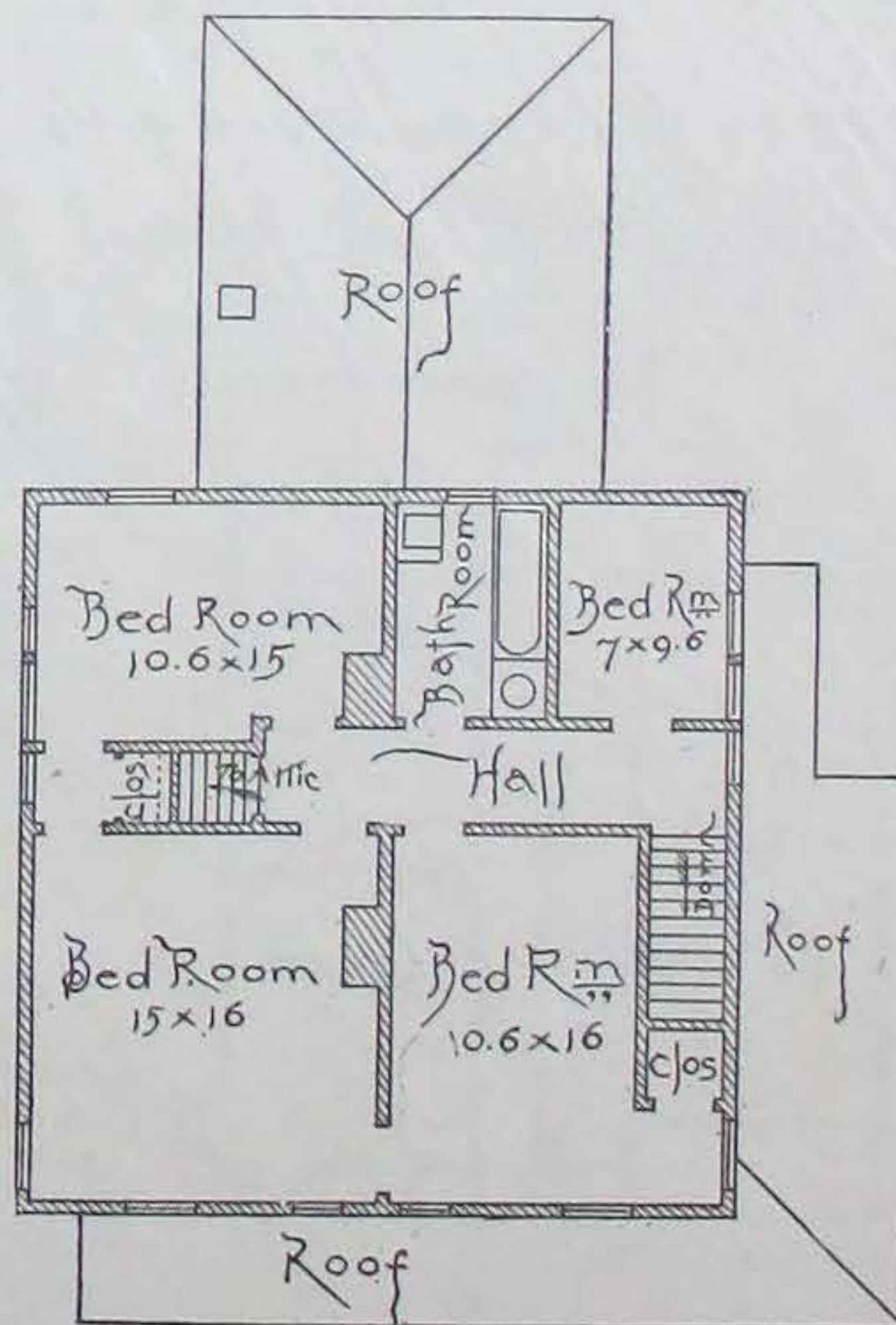
SPECIAL FEATURES.—Cellar under the whole house. Two bed-rooms in the attic.

Very pretty hall staircase and landing.

All the rooms of good size except one bed-room.

Heated by a furnace and fireplaces.

The interior is well arranged; the exterior is a good example of the best designing for cottages of moderate cost.



SECOND FLOOR. NO. 291



DESIGN No. 292. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 292

SIZE OF STRUCTURE: Front, 36 ft. Side, 30 ft. Extension, 10 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft., 4 in.; Second Story, 9 ft., 1 in.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$4,000, complete, except mantels.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

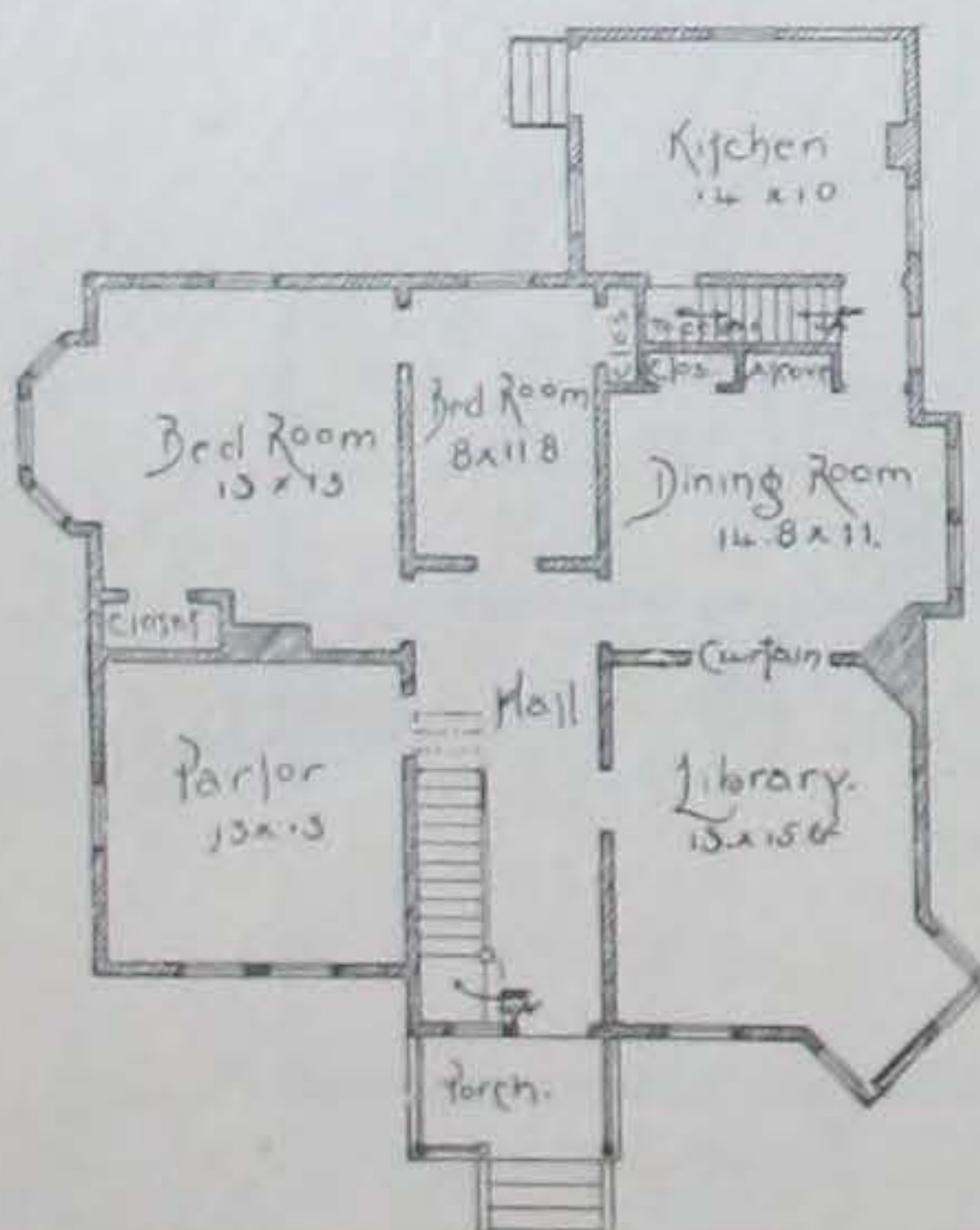
SPECIAL FEATURES.—Cellar under whole house.

The attic is not finished, but it affords available space for three rooms and storeroom.

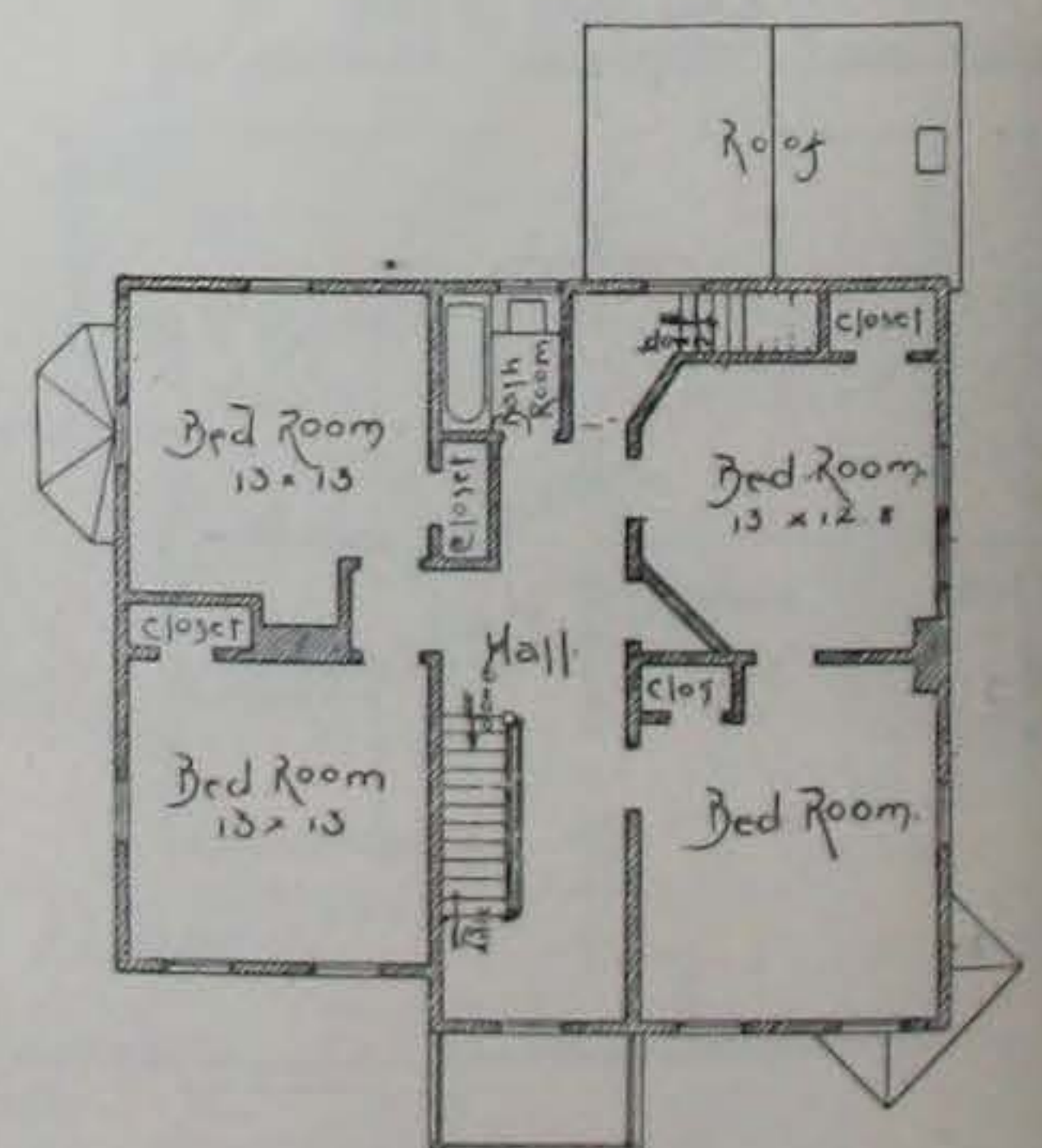
No fireplaces are shown on plans, as this house is heated by stoves.

Three of the principal rooms have fine bay-windows—one being a corner bay that affords a wide outlook.

An alcove in the dining-room provides a place for a sideboard. The best way, often, is to build in the sideboard at the time of finishing the house, if the workmen employed are capable of making a good job of cabinet work.



FIRST FLOOR. NO. 292



SECOND FLOOR. NO. 292



DESIGN No. 293. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 293

SIZE OF STRUCTURE: Front, 26 ft., 10 in. Side, 51 ft., 3 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft., 6 in.; Second Story, 8 ft., 6 in.

MATERIALS: Foundation, brick; First Story clapboards; Second Story, clapboards; Gables, shingles; Roof, shingles.

COST: \$2,800, complete, except heating apparatus, and mantels.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in

some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

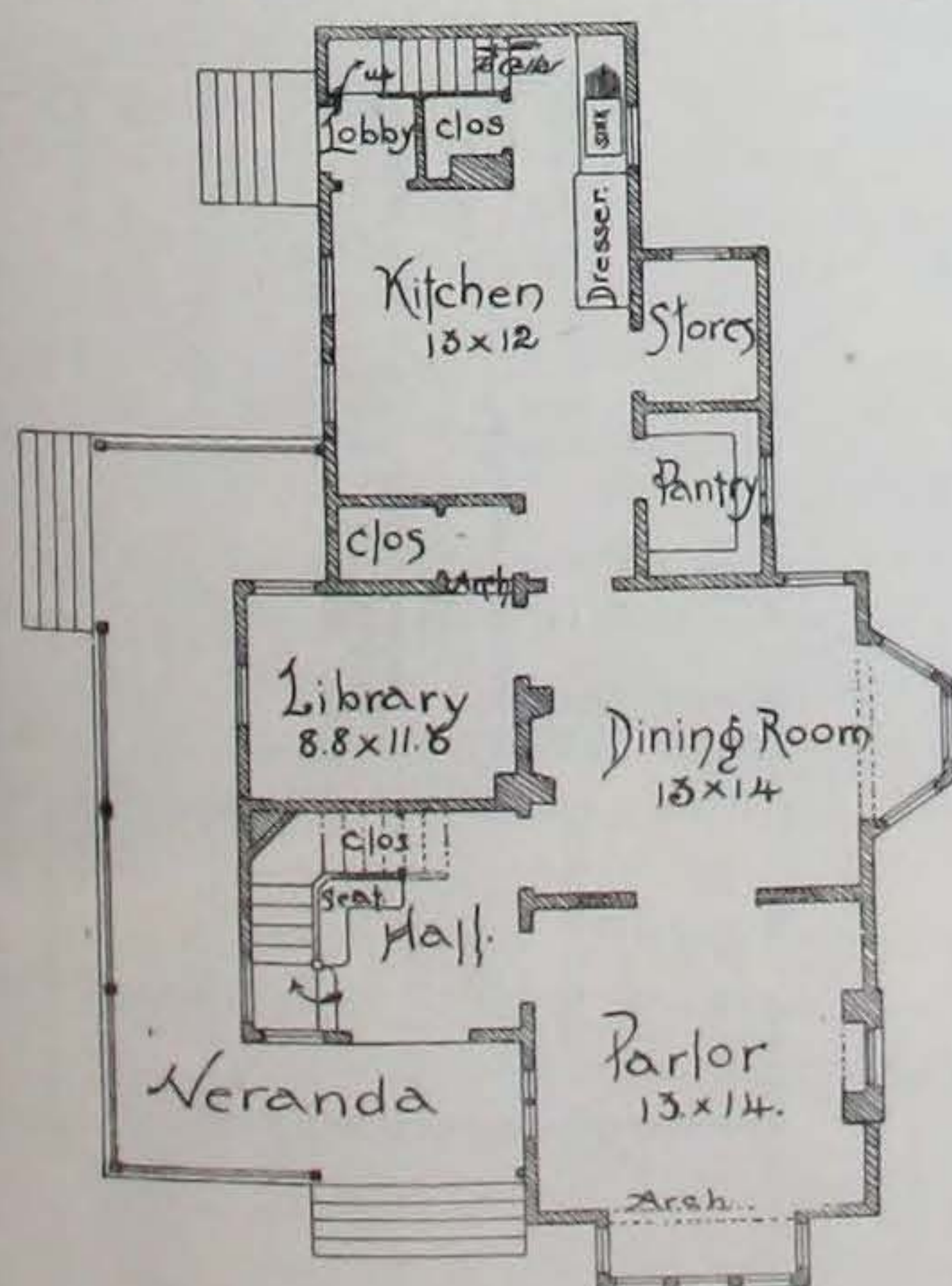
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Cellar under half of the house, outside chimney, with a window over the mantel in the parlor—a novel feature, much liked by all who have built it.

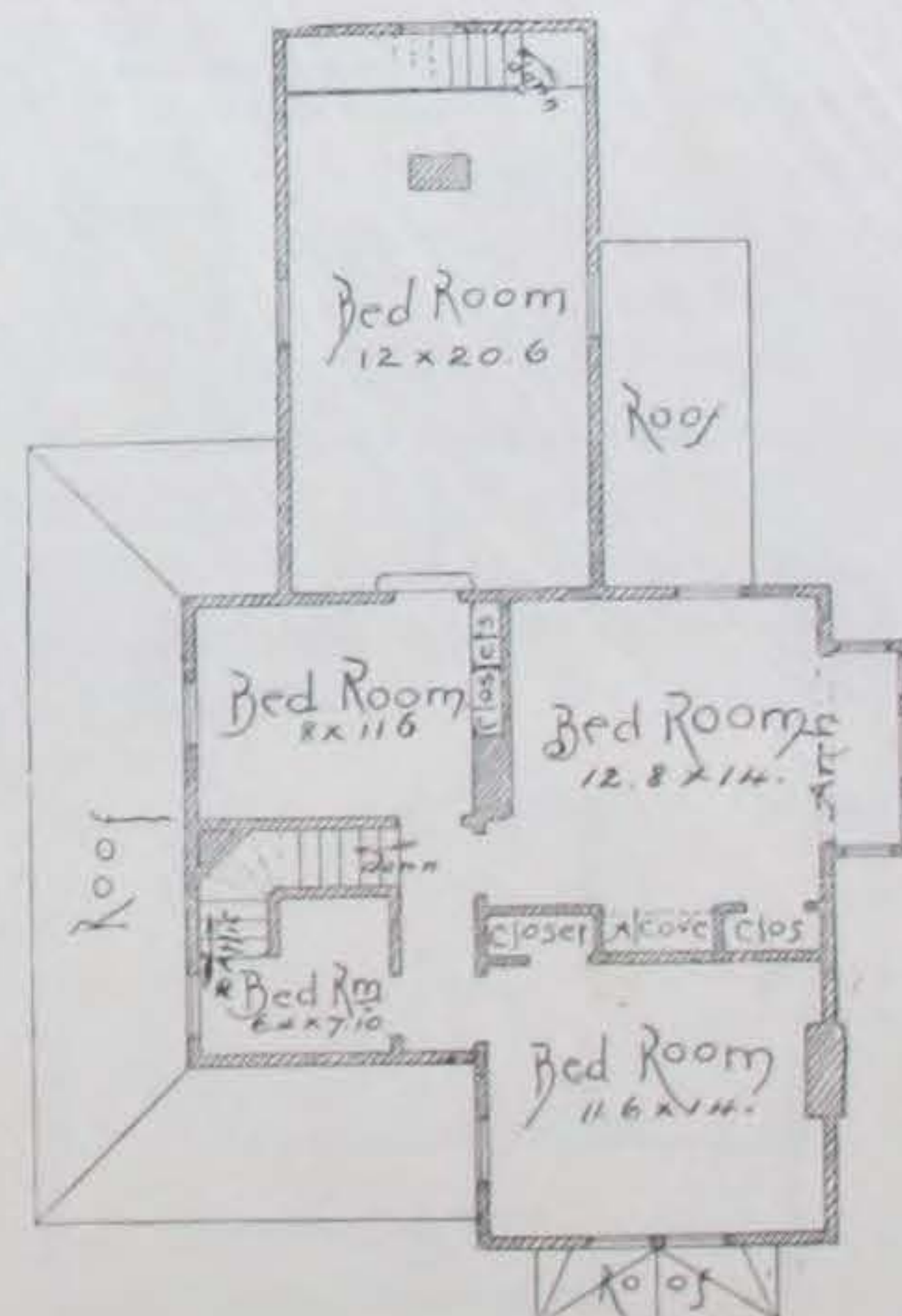
House heated by steam or furnace.

No plumbing, except what is required for the kitchen sink.

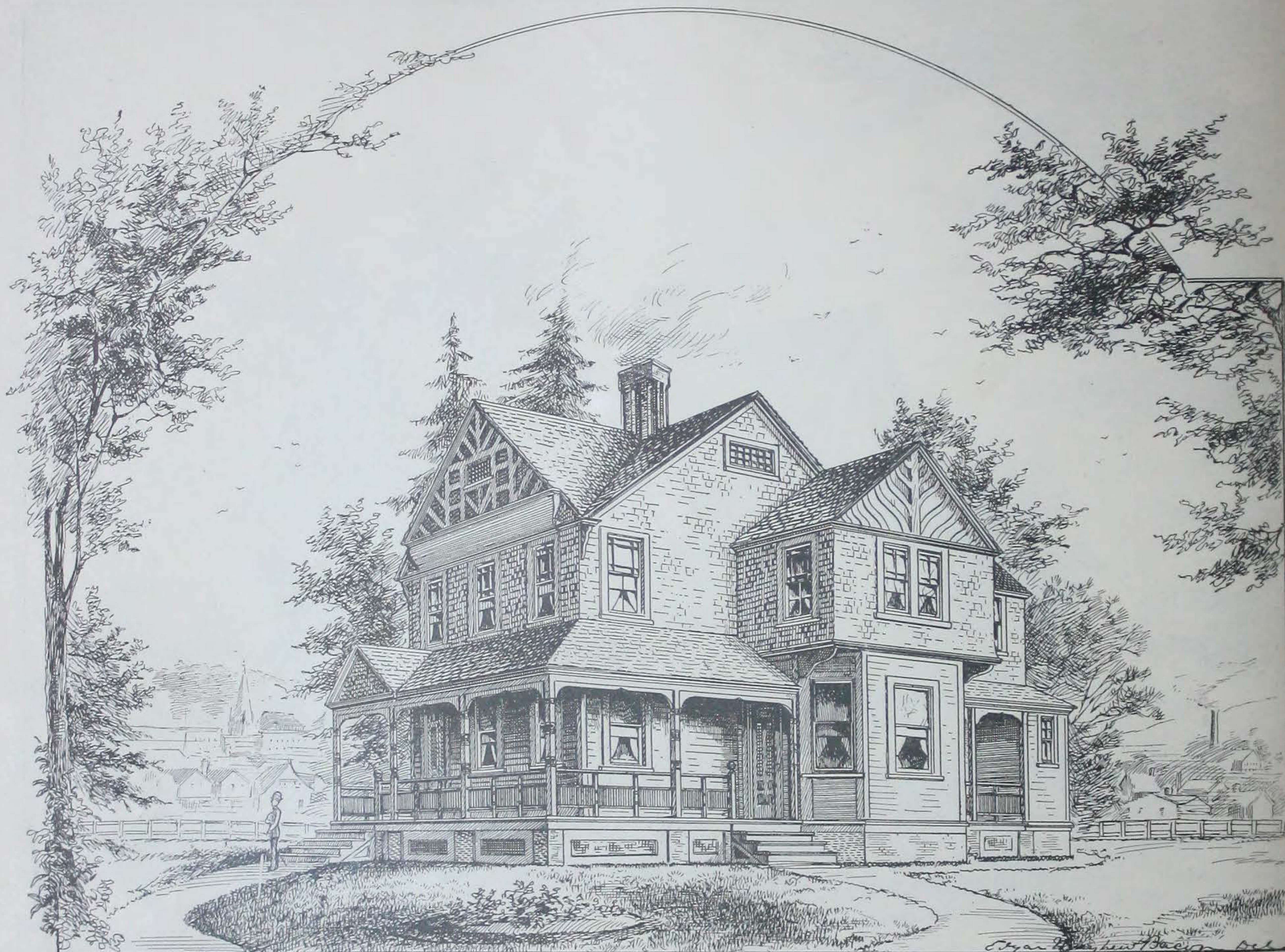
Very handsome stairway.



FIRST FLOOR. NO. 293



SECOND FLOOR. NO. 293



DESIGN No. 294. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 294

SIZE OF STRUCTURE: Front, 31 ft. Side, 45 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft.; First Story, 9 ft., 6 in.; Second Story, 8 ft., 6 in.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Gables, half timbered; Roof, shingles.

COST: \$3,300, all complete, except furnace, range, and mantels.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Col-

ors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Cellar under the whole house, with both outside and inside entrance to it.

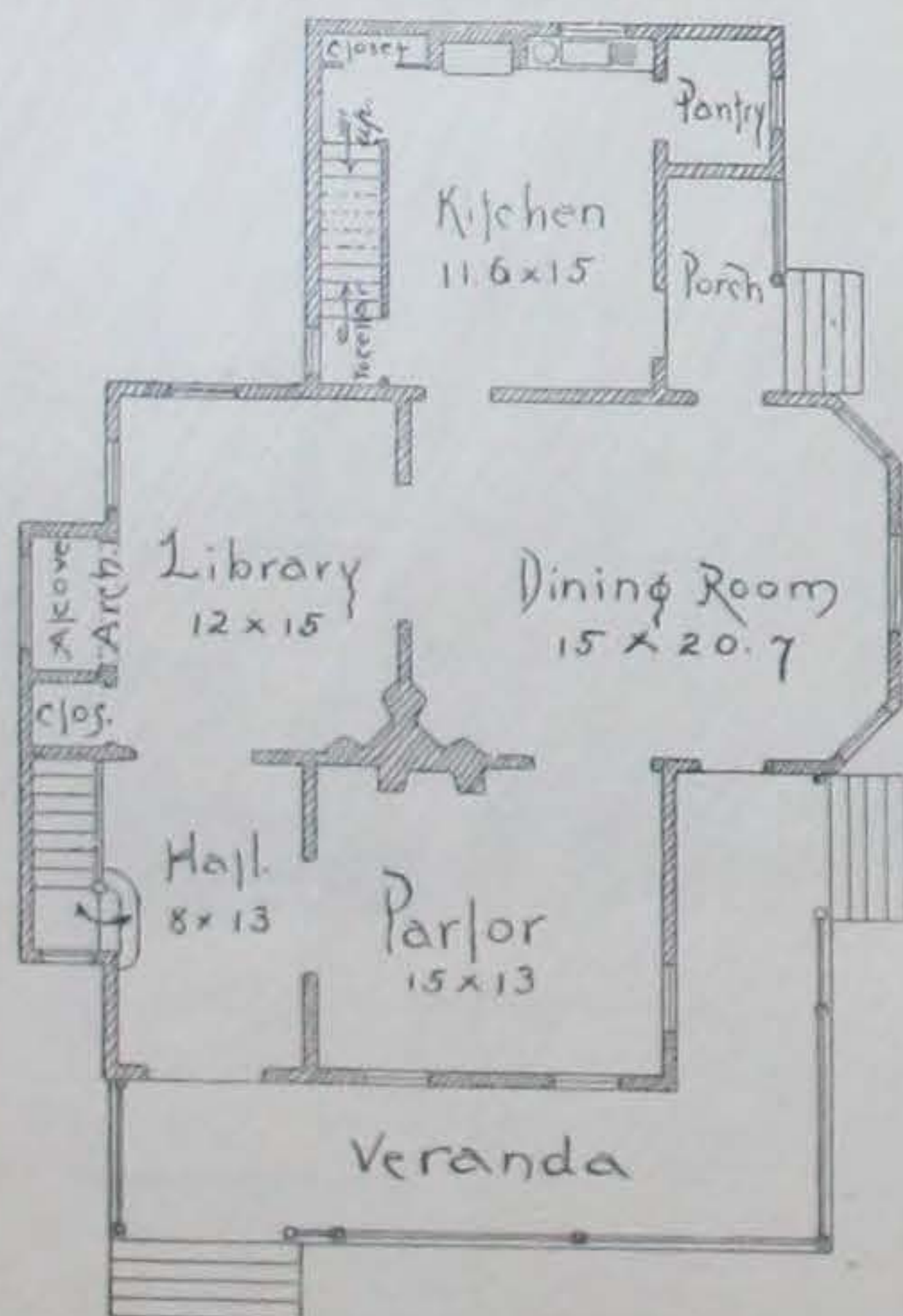
Attic unfinished, but it affords space for three rooms.

Heated by fireplaces and a furnace.

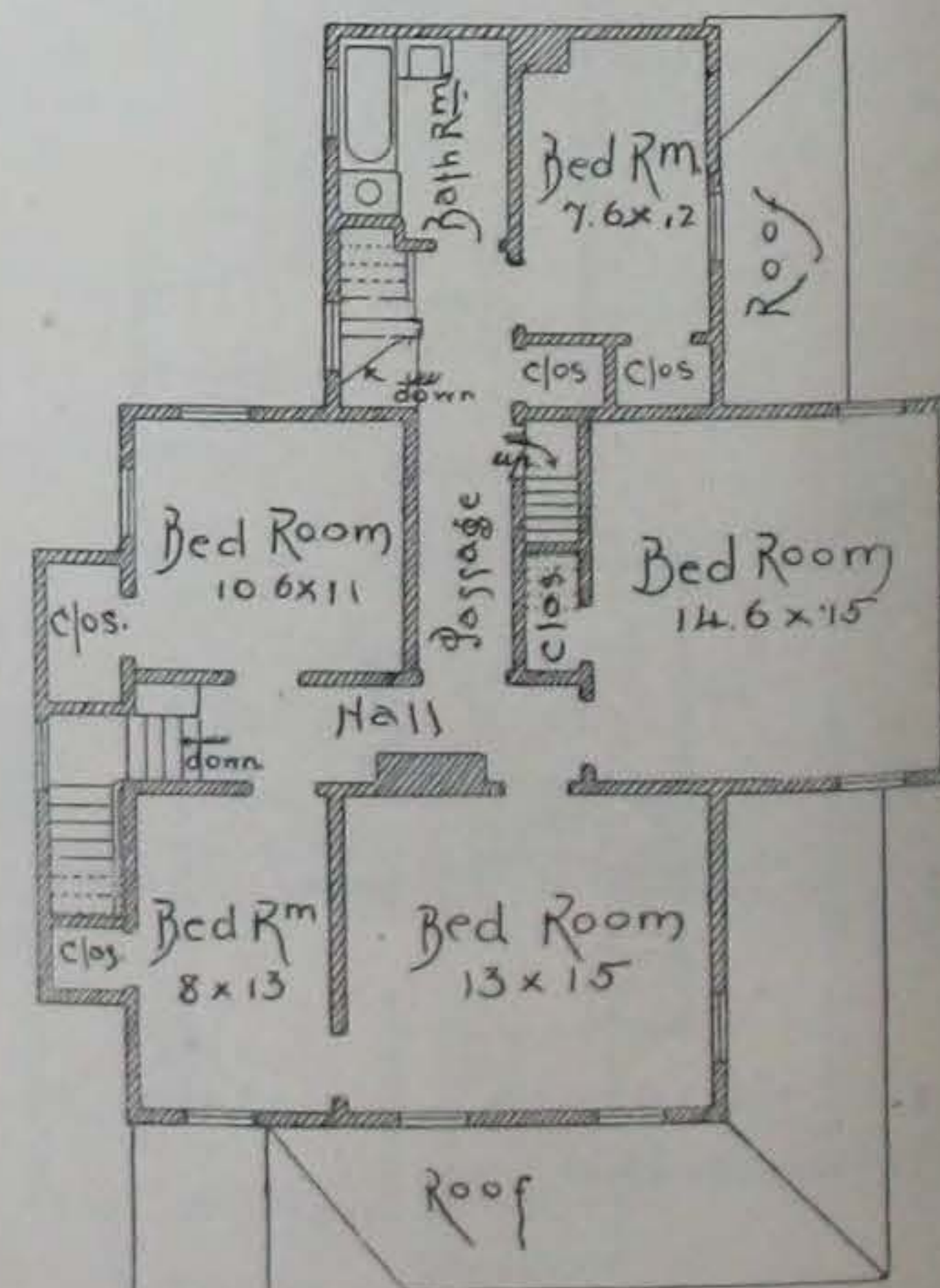
Has a large dining-room and plenty of bed-rooms—just the combination needed for a hospitable house.

The arched alcove in the library and the large bay in the dining-room are fine features.

Properly painted the exterior is very pleasing. The interior arrangement must commend itself to any one who has given much study to these matters.



FIRST FLOOR. NO. 294



SECOND FLOOR. NO. 294

DESCRIPTION OF DESIGN NUMBER 295

SIZE OF STRUCTURE: Front, including veranda, 34 ft., 6 in.
Side, 51 ft., 6 in.; including veranda, 58 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft.; Third Story, 8 ft.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Gables, shingles and half timber; Roof, shingles.

COST: \$4,500, complete, except heating apparatus and mantels.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—The elevations are similar in appearance to those of the preceding design, Number 294.

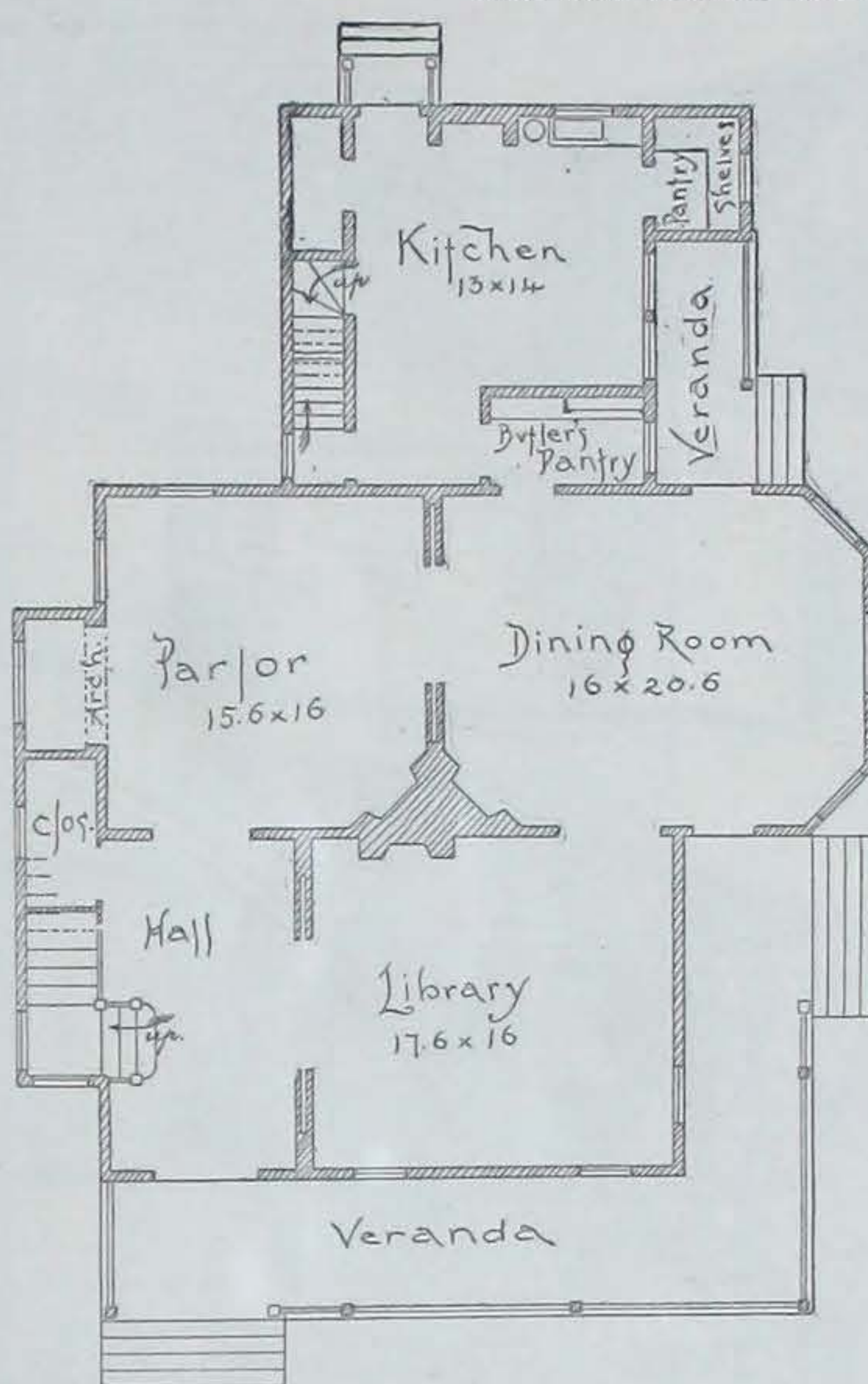
Cellar under the whole house.

Three rooms in attic. Plenty of closets.

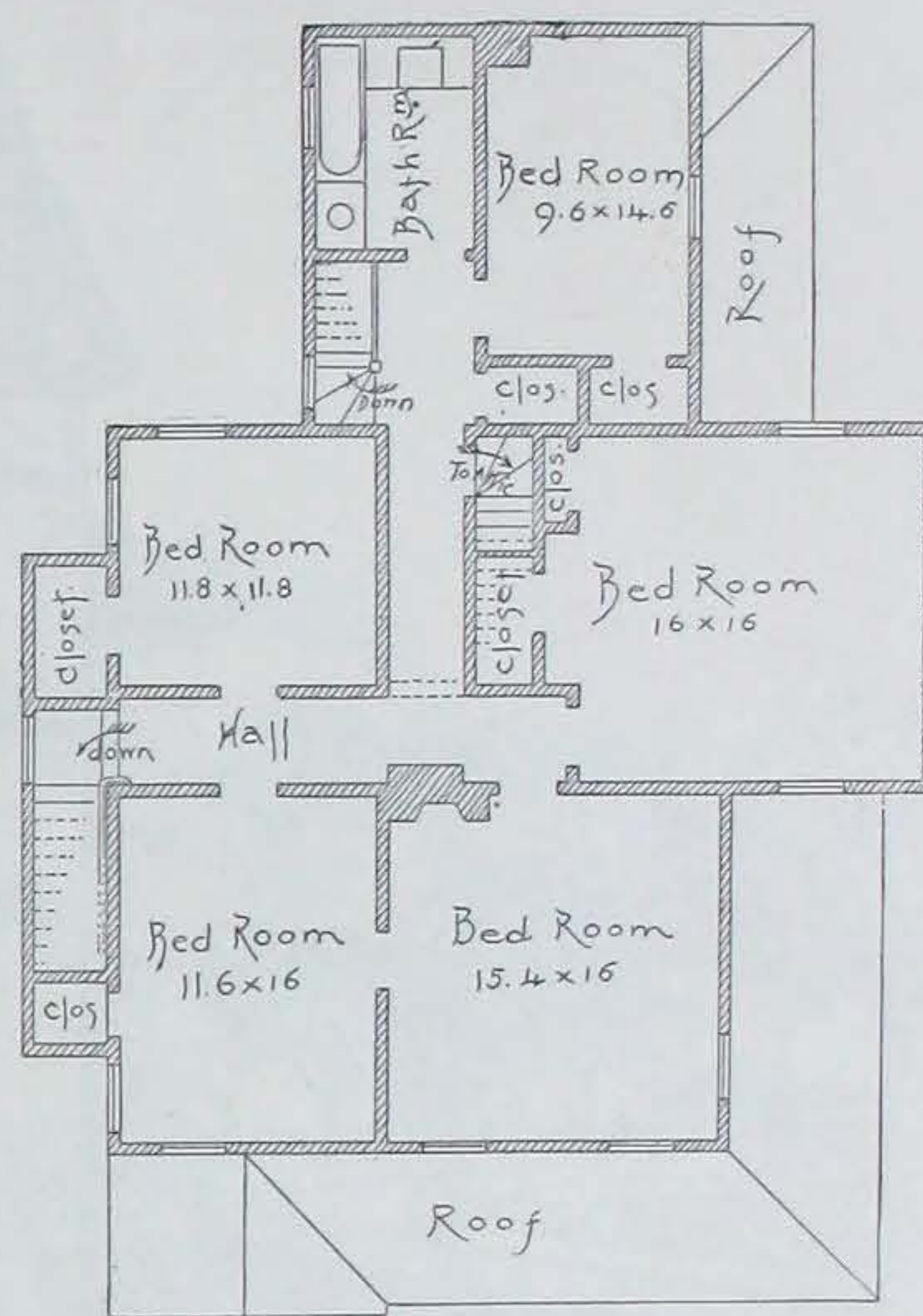
Heated by a furnace.

The stairway annex is a noticeable feature, leaving the hall clear and unobstructed, providing a large closet in the hall and a beautiful alcove in the parlor.

All the rooms are large.



FIRST FLOOR. NO. 295



SECOND FLOOR. NO. 295

A TALK ABOUT HOUSE-PAINTING

BY A PRACTICAL PAINTER

MANY persons seem to have the idea that it is the lead in the paint that preserves the wood, and an essay was read before "The Farmers' Club" in this city to that effect. I don't think any practical painter has such an idea. He knows that the oil is the preservative in outside painting. When the oil disappears the lead and other materials fall off, except Venetian red, which acts as a dye, and black, which seems indestructible. Neither of these is in much demand now. A house kept well oiled will stand the weather just as well as if painted. The pigments or colors are simply to please the eye.

If you prefer the old way, you will get good white lead, pure linseed oil and pure colors, and mix them to suit. If only an amateur, the best way is to get the lead tinted to the shades preferred, only requiring to be thinned to the proper consistency with oil.

The next thing is, how to apply it. The first requisite is to have the wood perfectly dry; a week without paint will not hurt, and gives time to shrink in dry weather. Of course this is not the usual way. The right way seldom is. Then cover all knots with a strong coat of shellac varnish. This will not prevent pitch or resin, if they are in large quantities, from coming through, however. Then give a flowing coat of very thin paint, as near the required color as you can. Next, with a putty-knife (not with the fingers), fill all checks, flaws and nail holes smoothly. This coat should stand another week. Then give a second coat, at least twice as thick as the first, and when this has had a week or ten days to harden, apply a third coat, not so heavy as the second, and trim with darker colors to suit. The trimming colors should be quite heavy, so as not to show streaks of the under color. There is a new way, which is to finish the painting with the second coat, and then give a coat of hard oil, spar varnish, or wood-preserved.

When a house is once well painted, a very slight expense will keep it in perfect order. A thin coat every second year will make it as fresh as ever. Then what makes so many houses appear

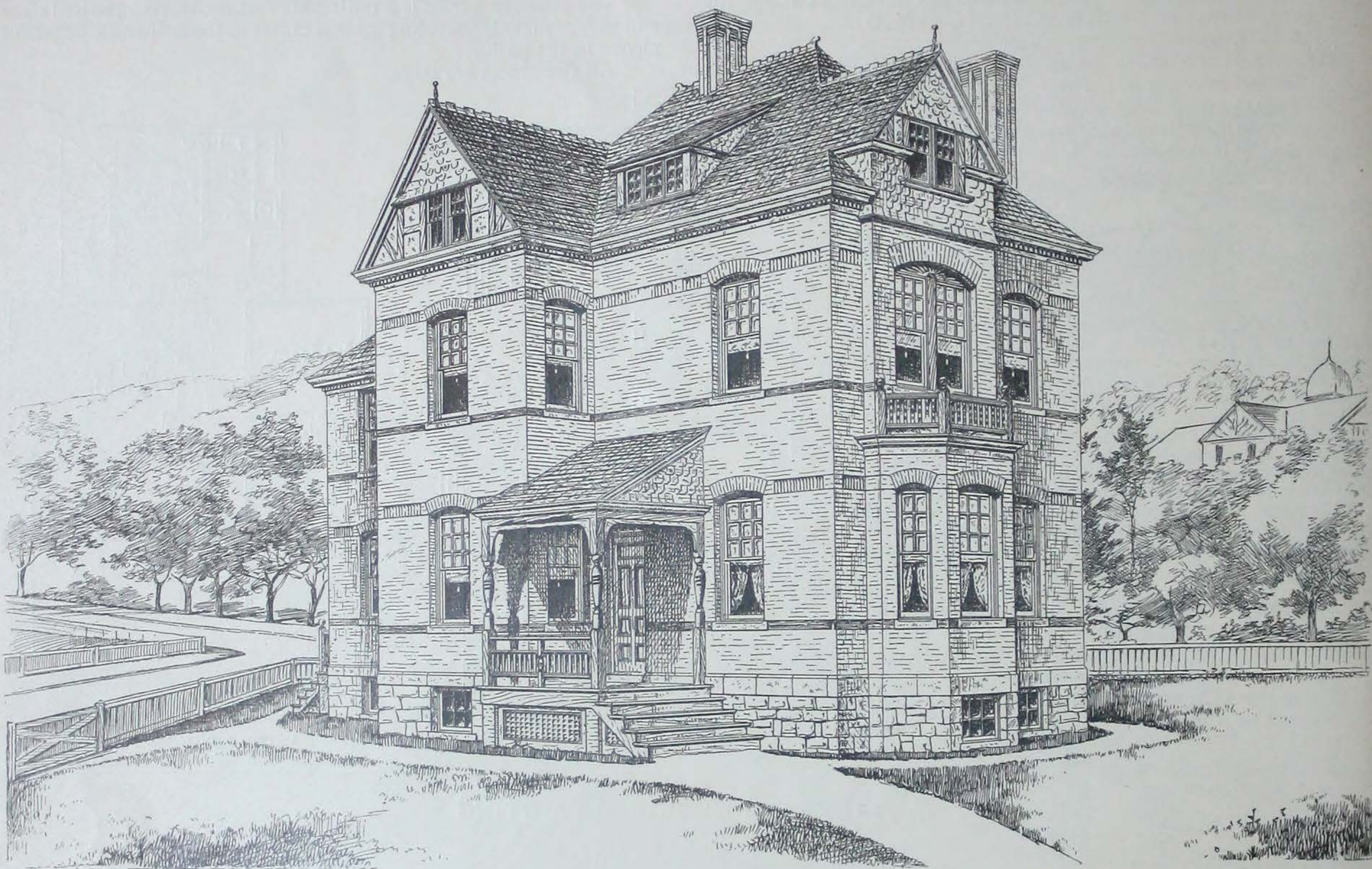
shabby, even within a year? What causes the fading, blistering and peeling? 1st, Hurry; not giving the wood proper time to season, so as to absorb the oil. 2d, Plastering two or three coats, one on top of the other, before they are thoroughly dry. 3d, Using cheap, "ready-mixed" paints, composed of lime, benzine, water, Paris white, oil, and alkali, all "warranted perfectly pure or money refunded." (I must not be understood to say that all ready-mixed colors are frauds, and that none are good.)

If you examine a manufacturer's price-list of colors you will find generally three prices, representing three qualities or grades. I presume there are ten pounds of the two latter grades sold to one of the first quality; in fact, the retailer often does not keep the first at all. There is little or no call for it. Yet, for real economy, one pound of pure color is worth five of the ordinary. As to the durability of colors, as a rule the simplest last the longest—that is, those having the fewest combinations, as black, with white, for pearl or gray; ochre, with white, forming cream to buff. The introduction of a third color is more liable to cause fading. Some of the most permanent colors when used alone, in combination with white become the most fleeting shades; as, for instance, Venetian red. The olives, drabs and creams, being the most enduring as well as least obtrusive, are very suitable and appropriate for the principal or body color. For the trimming colors the same rule applies. High colors fade the quickest.

Shingle-work should harmonize by contrast with the other parts. Creosote-stains, giving light to dark walnut tints, are prevailing now and look well.

As to the amount of lead and oil required for new work, it is safe to estimate that 25 pounds of lead and 2 gallons of oil will cover 150 square yards.

The foregoing remarks are not intended to make "every man his own painter." They simply recite a few leading facts proved by experience and contributed for the benefit of your readers.



DESIGN No. 296. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 296

SIZE OF STRUCTURE: Front, 19 ft., 8 in. Side, 49 ft., 2 in.
 SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft.; Third Story, 8 ft.

MATERIALS: Foundation, stone; First Story, brick; Second Story, brick; Gables, shingles and half timbered; Roof, shingles.

COST: \$3,500, complete, except furnace and mantels.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

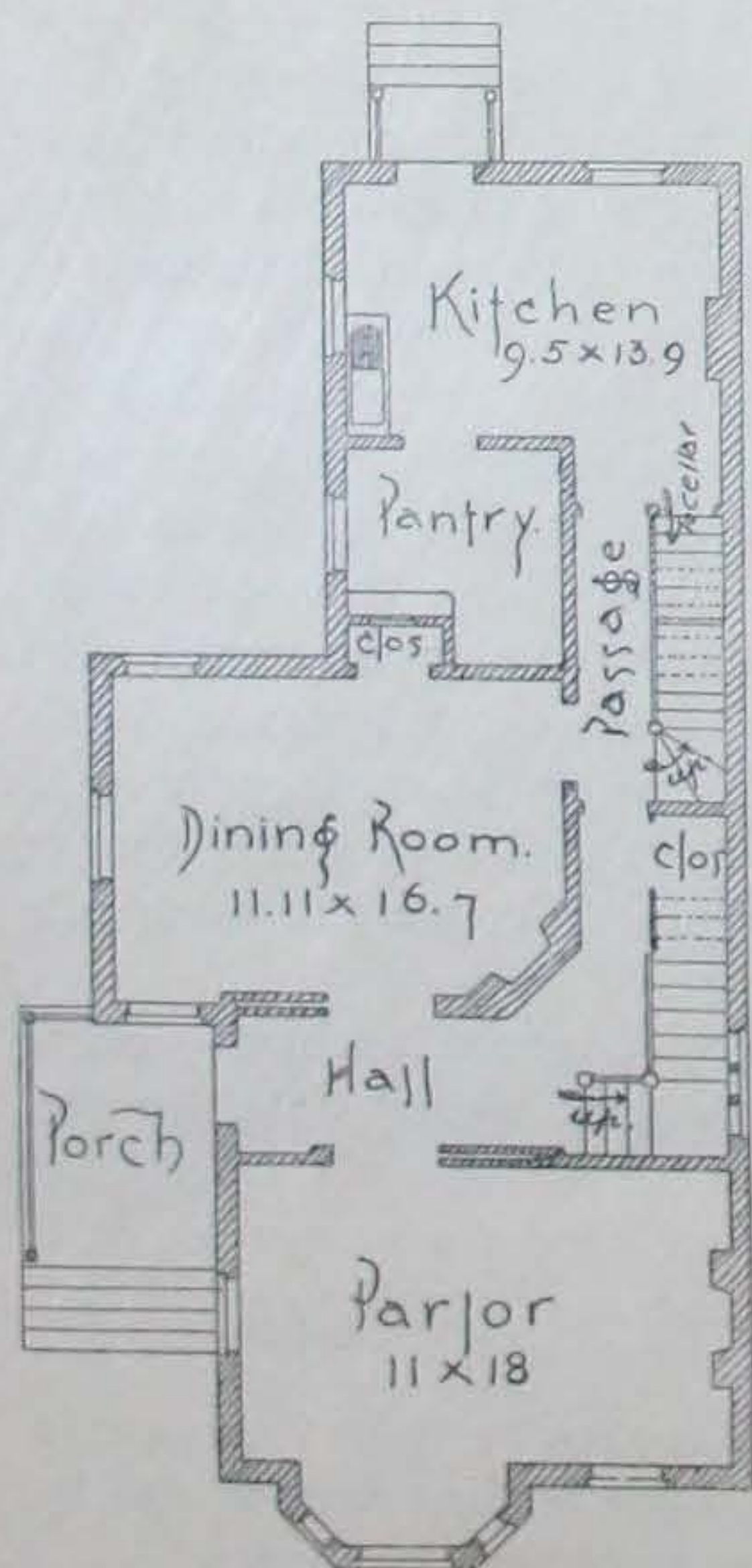
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Cellar under the whole house. Three good bed-rooms in the attic, beside the hall and a trunk-room. Laundry in the basement.

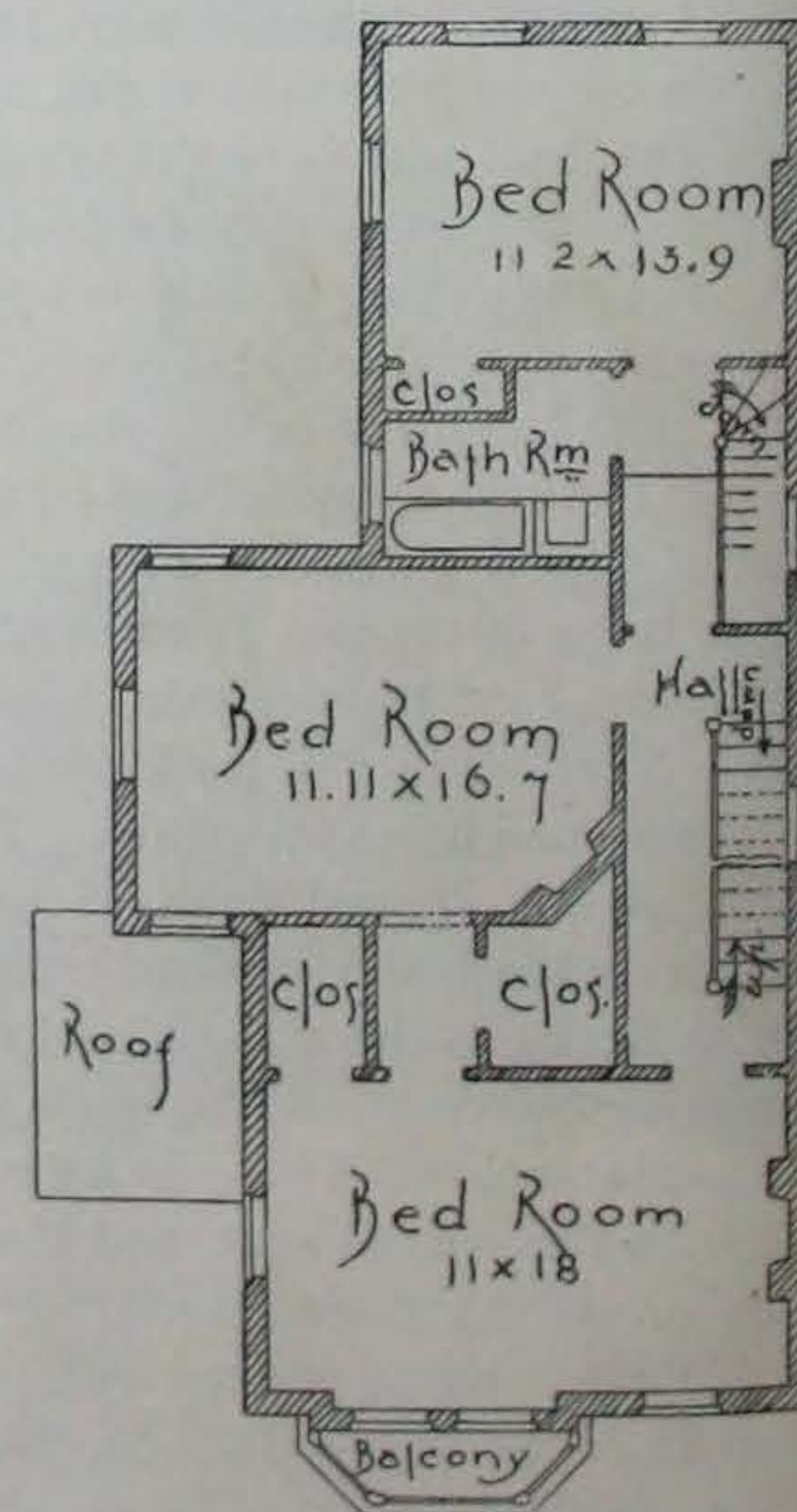
This house, being only 27 ft. in width at its widest point, is a good one for a city or village where ground is expensive.

The rooms are very compactly and conveniently arranged. A stained-glass window over the staircase lights the hall and stairs.

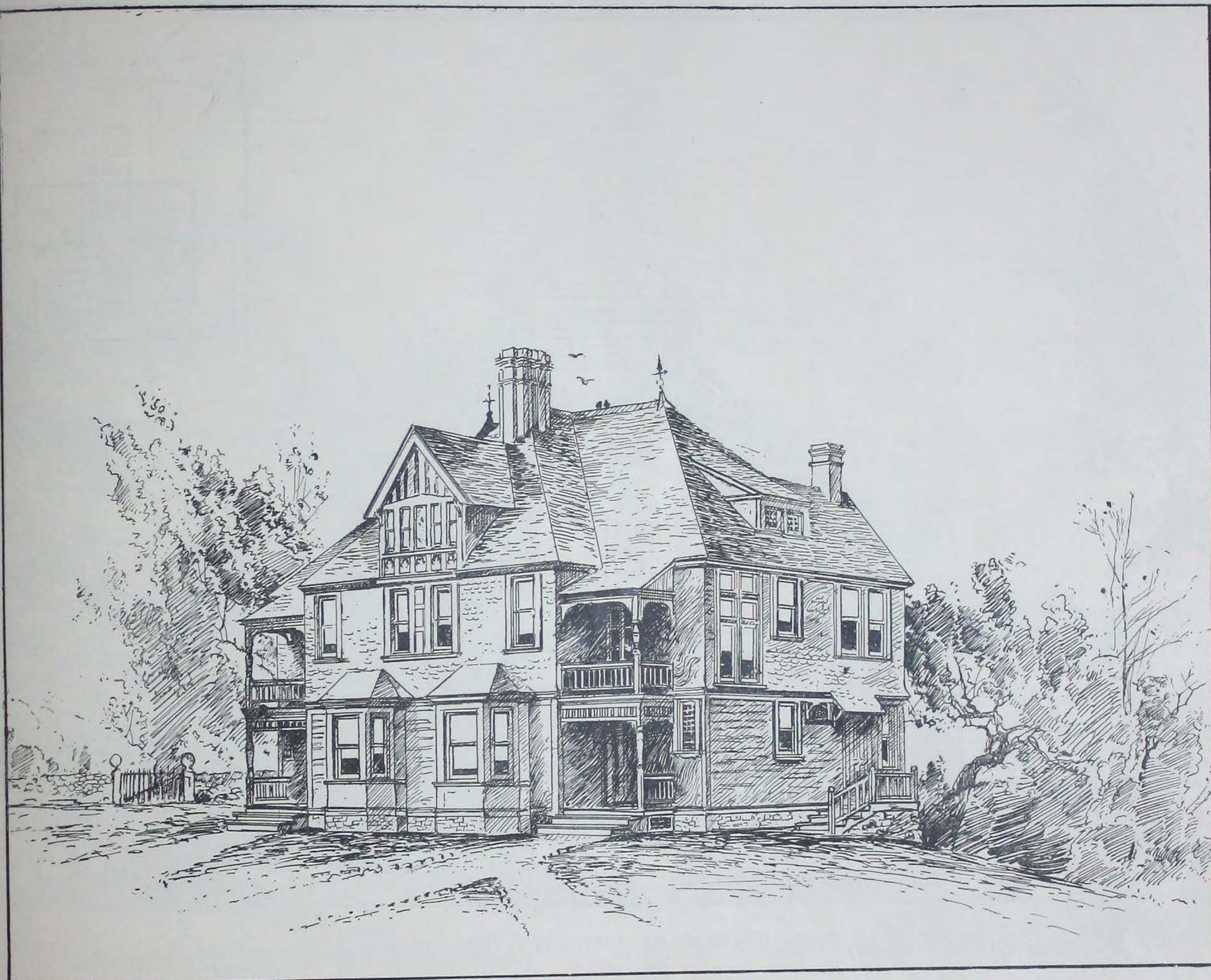
A large pantry, and large closets throughout.



FIRST FLOOR, NO. 296



SECOND FLOOR, NO. 296



DESIGN No. 297. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 297

SIZE OF STRUCTURE: Front, 50 ft. Side, 40 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft., 6 in.; Second Story, 9 ft.; Attic, 8 ft.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Gables, half timbered; Roof, shingles.

COST: \$6,000, complete.

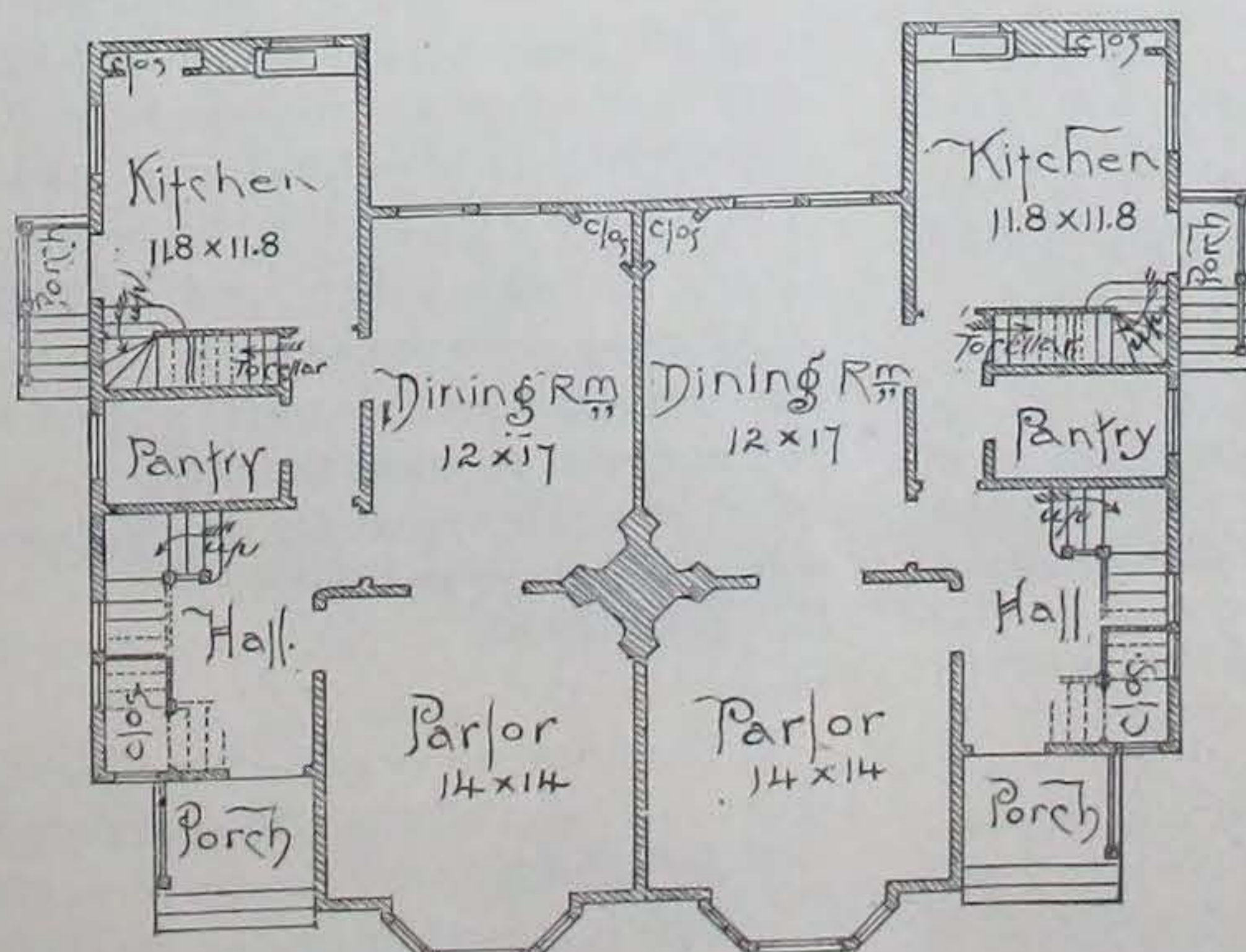
[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—A double house.

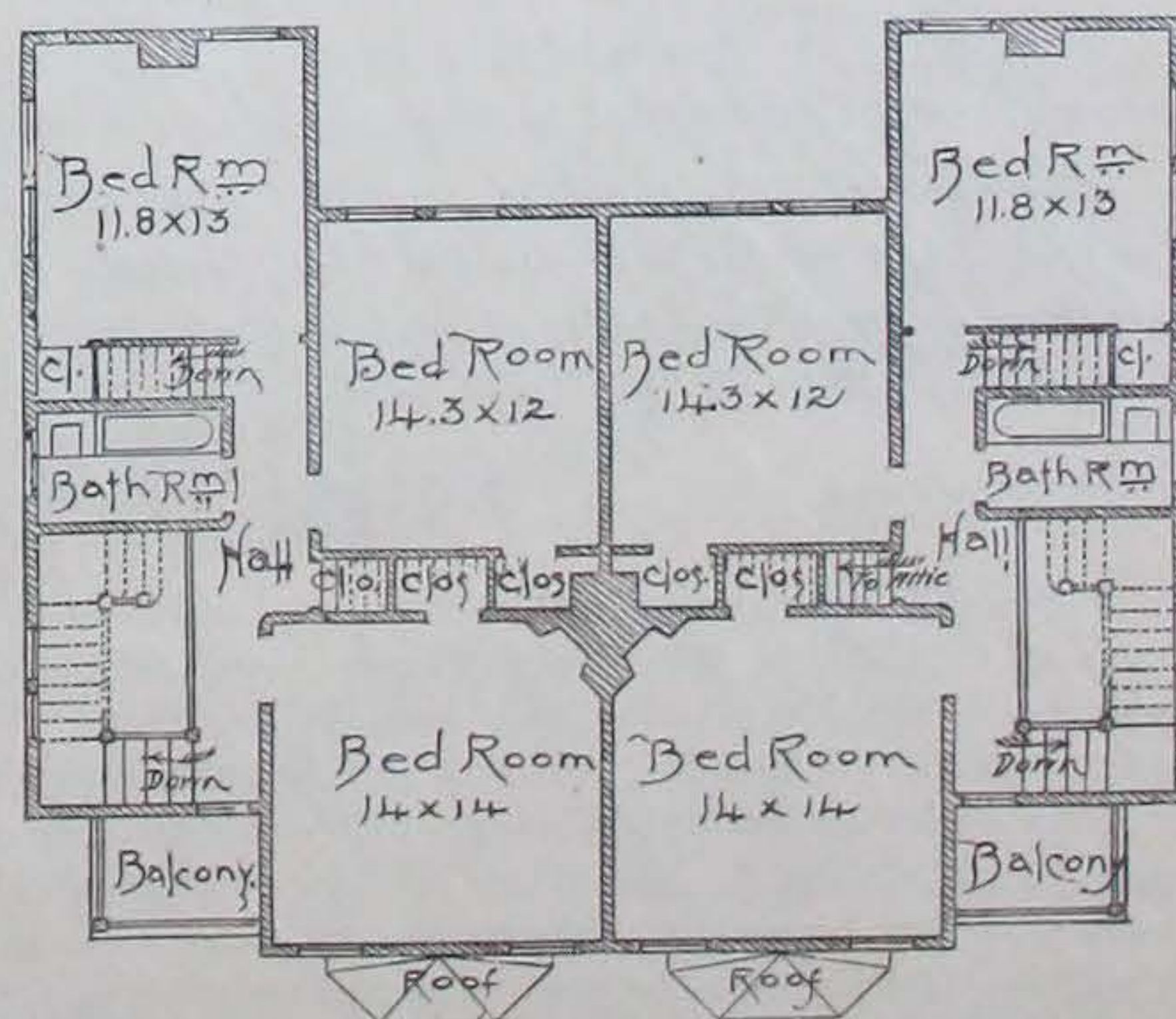
Cellar under the whole house. Three good rooms in the attic of each house.

Stained glass in the staircase windows.

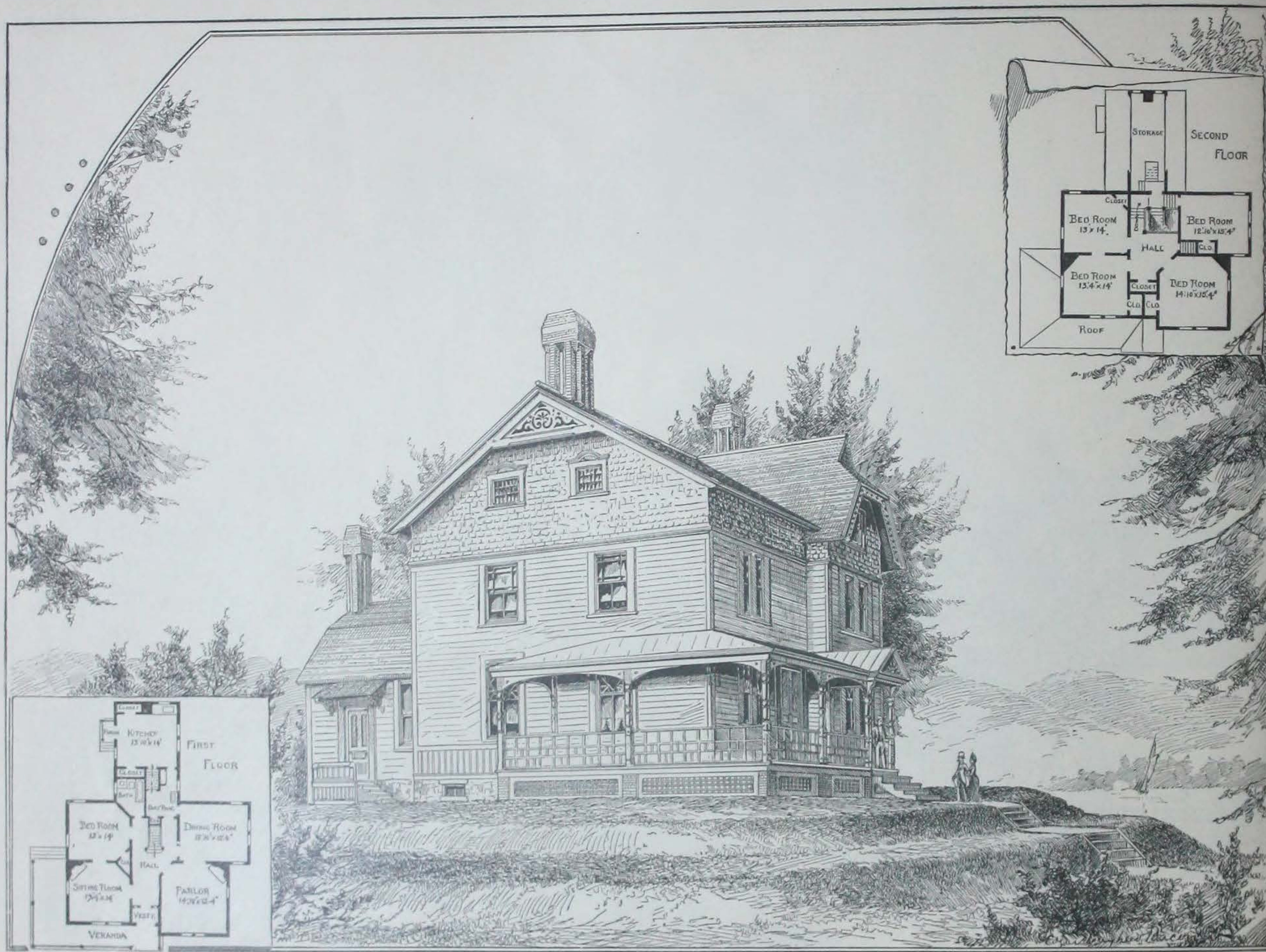
The houses are entirely separate and distinct one from the other. Each has a fine balcony. Beside the main staircase, there are servants' stairs from the cellar to the second story. Portières between parlor and dining-room.



FIRST FLOOR. NO. 297



SECOND FLOOR. NO. 297



DESIGN No. 298. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 298

SIZE OF STRUCTURE: Front, 45 ft., 4 in., inclusive of veranda.
Side, 58 ft., inclusive of veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft., 2 in.; Second Story, 8 ft., 9 in.; Third Story, 8 ft.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, clapboards; Gables, shingles; Roof, slate.

COST: \$4,500, complete, except mantels and heaters.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants.

The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Cellar under the whole house with an outside stairway to it, in the rear.

Four rooms can be finished off in the attic, if desired, the cost of which, however, is not included in the estimate. The utilization of the attic floor is often neglected. The walls and roof are there already, and it is only a small expense to put up the partitions in the plain style that is becoming for this floor. Servants can always be lodged there, and at times when the house is over-full of company, with the anxious ones wondering how they are all to be disposed of, a sensible guest or two will be very grateful for a clean bed in a neat room in the attic.

The arrangement for the bath-room on the first floor is convenient where there are elderly people or an invalid. If preferred it can be placed in the second story, over the kitchen, where "storage" is marked on the plan.

The front stairway is a prominent and beautiful feature, and very accessible from all the principal rooms.

An abundance of closets throughout the house.

This is a good, plain, but handsome house, affording a great deal of room for the amount expended.



DESIGN No. 299. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 299

SIZE OF STRUCTURE: Front, 38 ft.; including bay-window, 41 ft.
Side, 44 ft., including veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft.; Third Story, 7 ft., 6 in.

MATERIALS: Foundation, brick and stone; First Story, clapboards; Second Story, shingles; Gables, half timbered; Roof, shingles.

COST: \$4,600, complete, except furnace and mantels.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

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—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

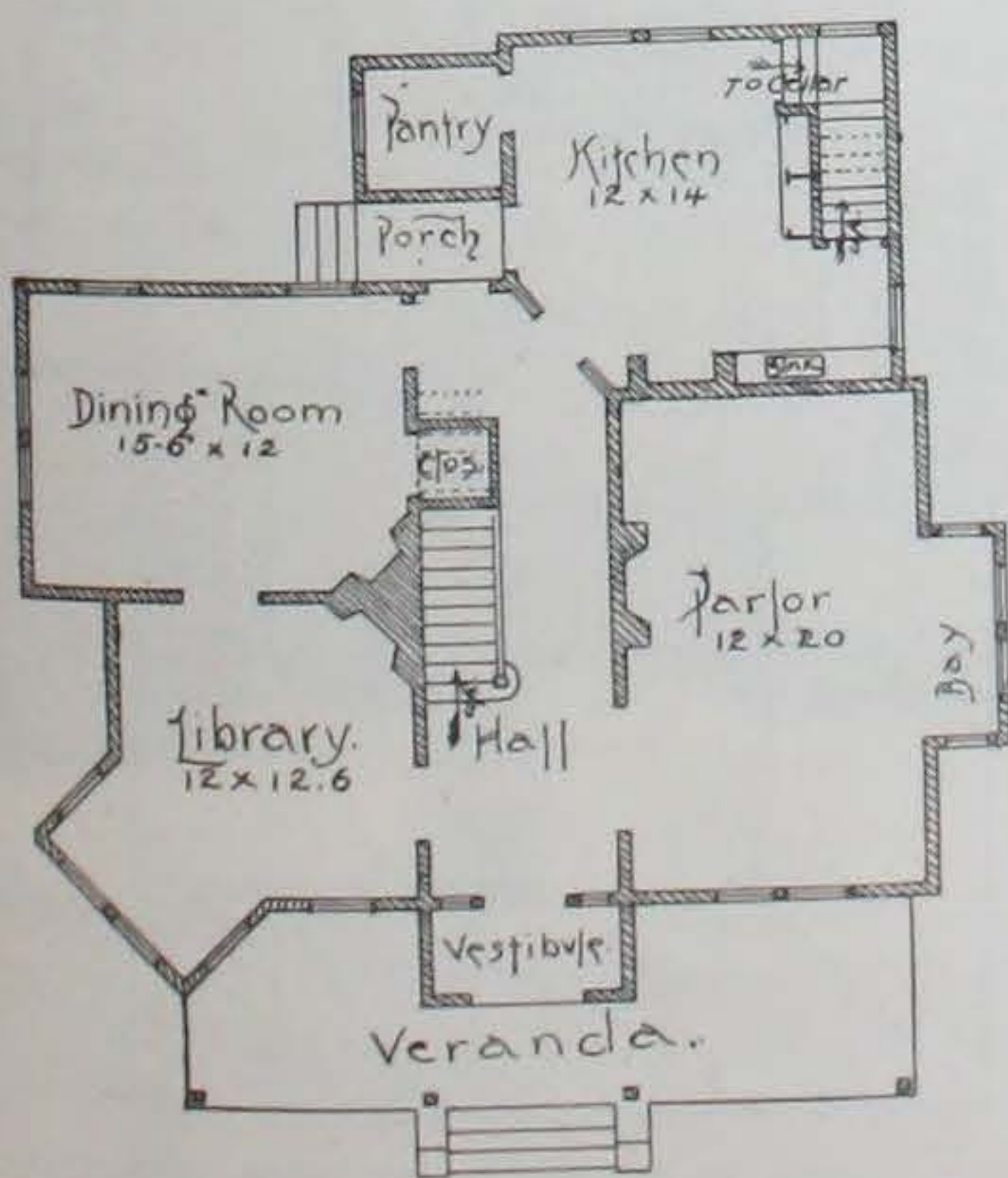
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Cellar under the whole house. Three rooms in the attic, and abundant store-room.

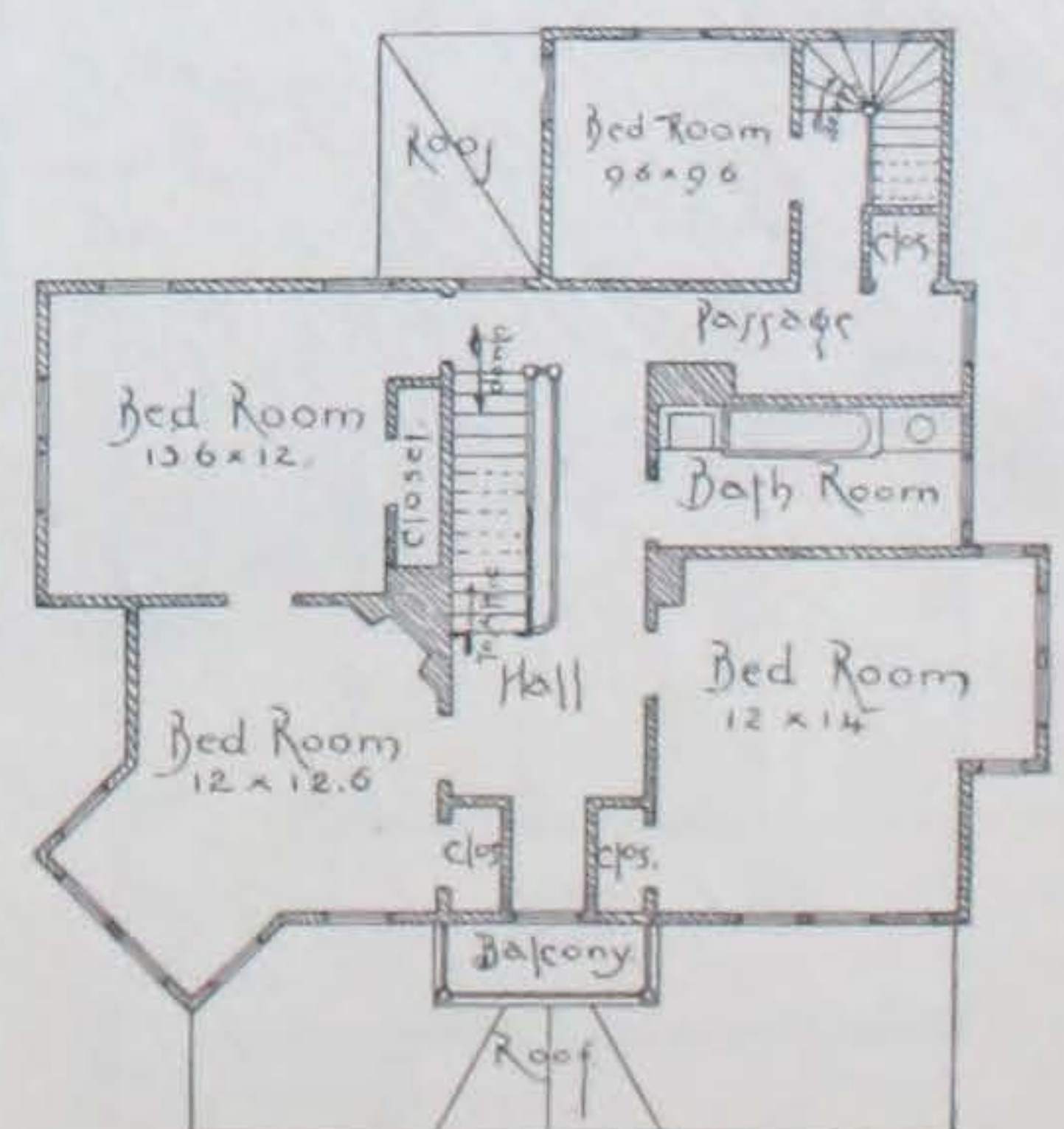
Reference to floor plans shows convenient and complete arrangement of rooms.

The exterior appearance is novel and striking. A large balcony out of front attic-room.

Heated by furnace or steam.



FIRST FLOOR. NO. 299



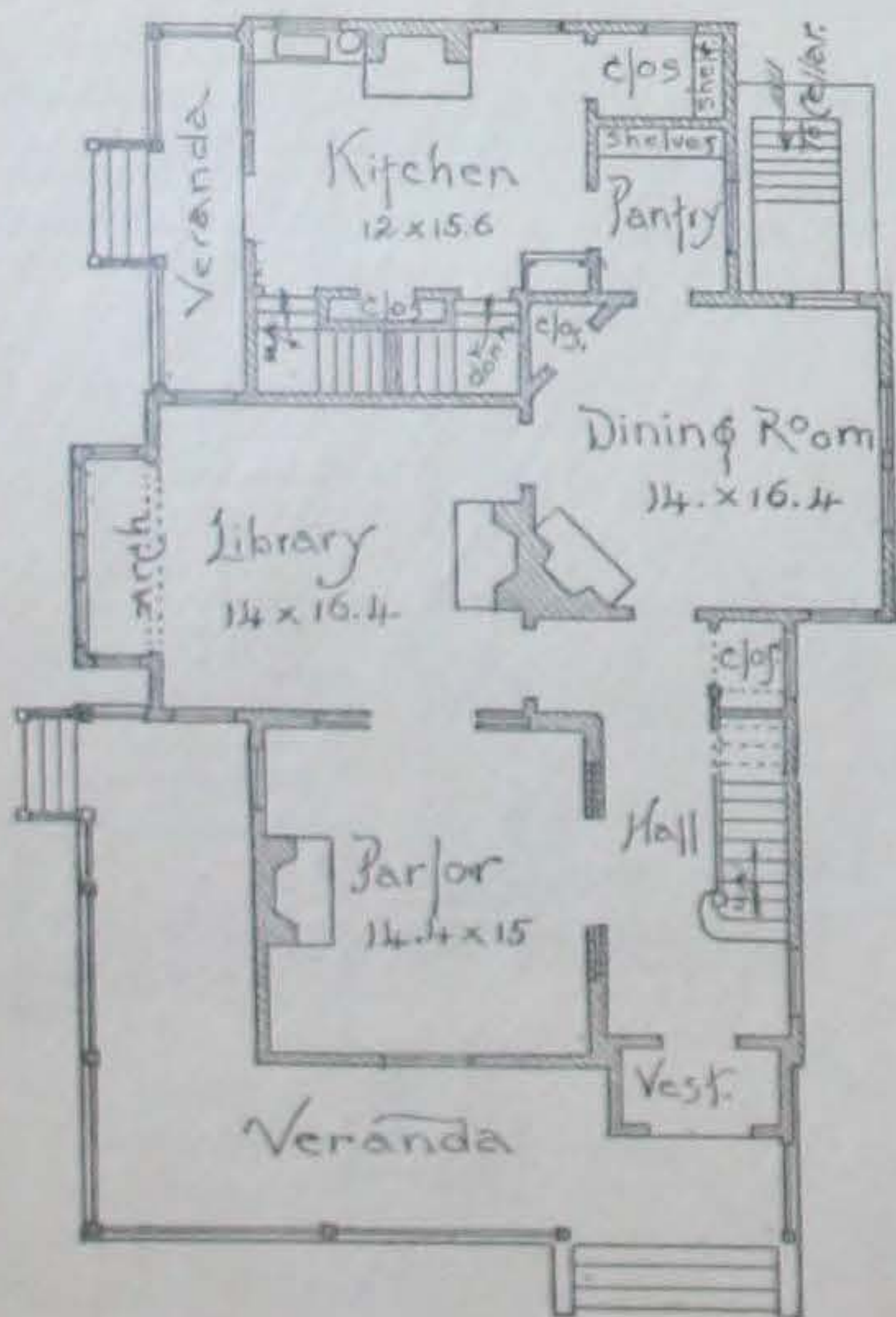
SECOND FLOOR. NO. 299



DESIGN No. 300. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 300

SIZE OF STRUCTURE: Front, 25 ft., 8 in.; including side wings and bay-window, 38 ft. Side, 48 ft., 6 in.; including veranda, 56 ft., 6 in.



FIRST FLOOR, NO. 300

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft., 4 in.; Second Story, 8 ft., 4 in.; Third Story, 8 ft.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, clapboards; Gables, half timbered, cement and shingles; Roof, shingles.

COST: \$4,500, complete, except furnace and mantels.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less

—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

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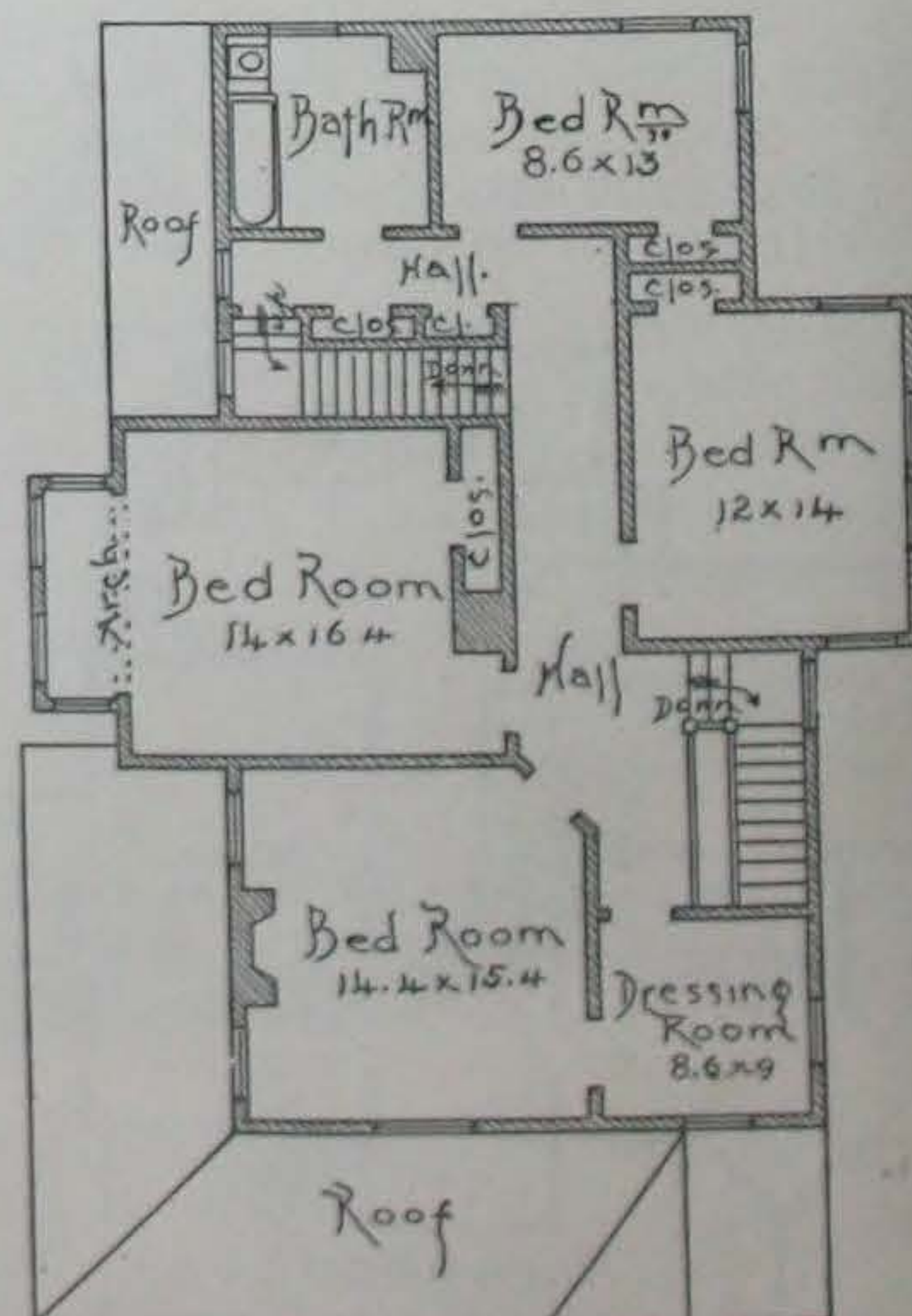
SPECIAL FEATURES.—Cellar under whole house, with both inside and outside entrances. A large and well-lighted laundry in the cellar.

Heated by furnace.

All rooms on the first floor are large and very conveniently arranged.

The attic contains two large bed-rooms and a lighted store-room, which could be utilized as a bed-room if preferred.

This is one of our most popular designs.



SECOND FLOOR, NO. 300

DESCRIPTION OF DESIGN NUMBER 301

SIZE OF STRUCTURE: Front, 33 ft., 8 in., including bay-windows. Side, 52 ft., 8 in.; including veranda, 61 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft., 6 in.; First Story, 10 ft.; Second Story, 9 ft.; Third Story, 8 ft.

MATERIALS: Foundation, brick and stone; First Story, clapboards; Second Story, clapboards and shingles; Gables, half timbered and shingled; Roof, shingled.

COST: \$5,500, complete, except heating apparatus, kitchen range and mantels.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

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Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

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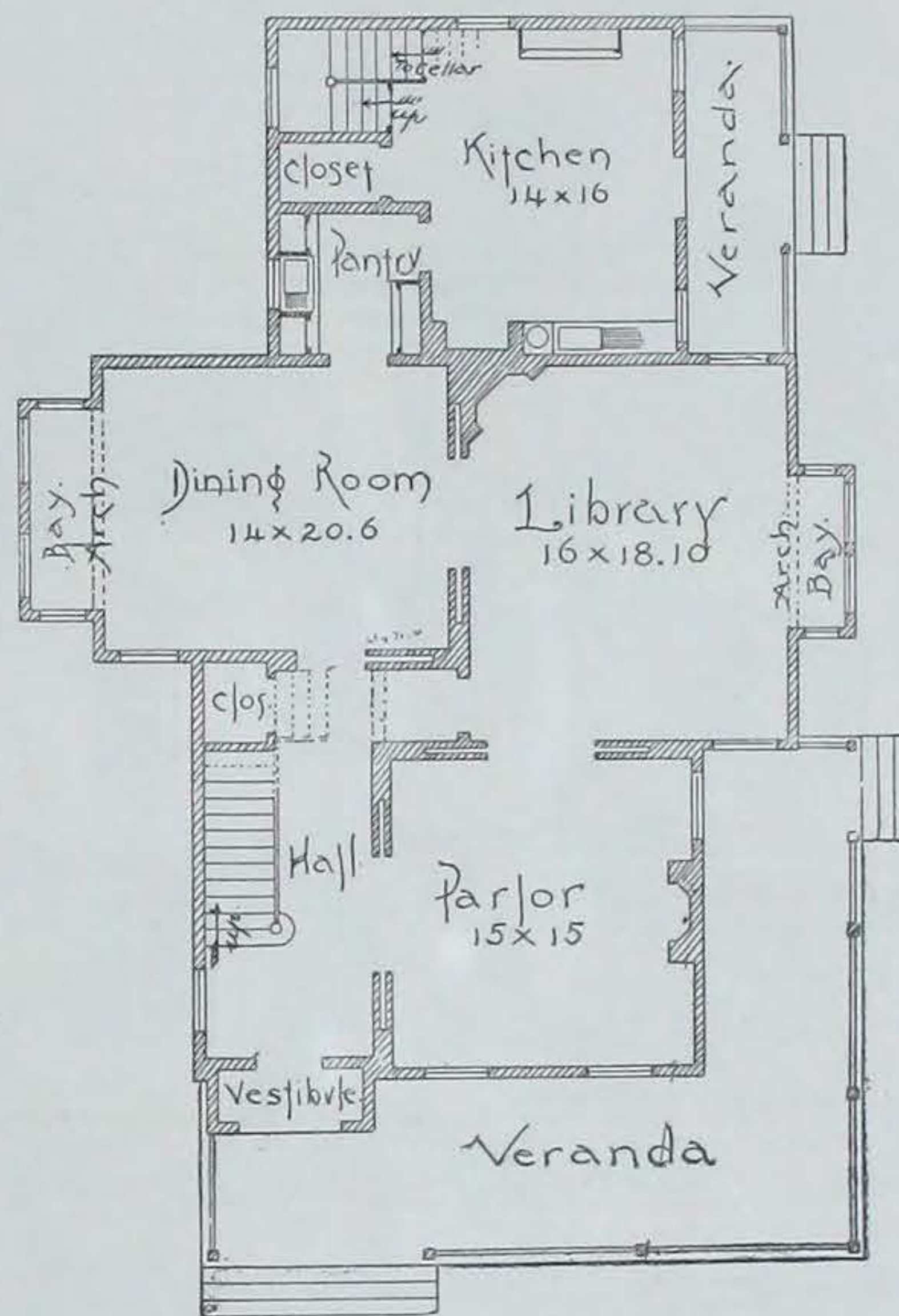
SPECIAL FEATURES.—The exterior in the same style as the preceding design, Number 300. The plans are also similar.

Cellar under the whole house; laundry under the kitchen.

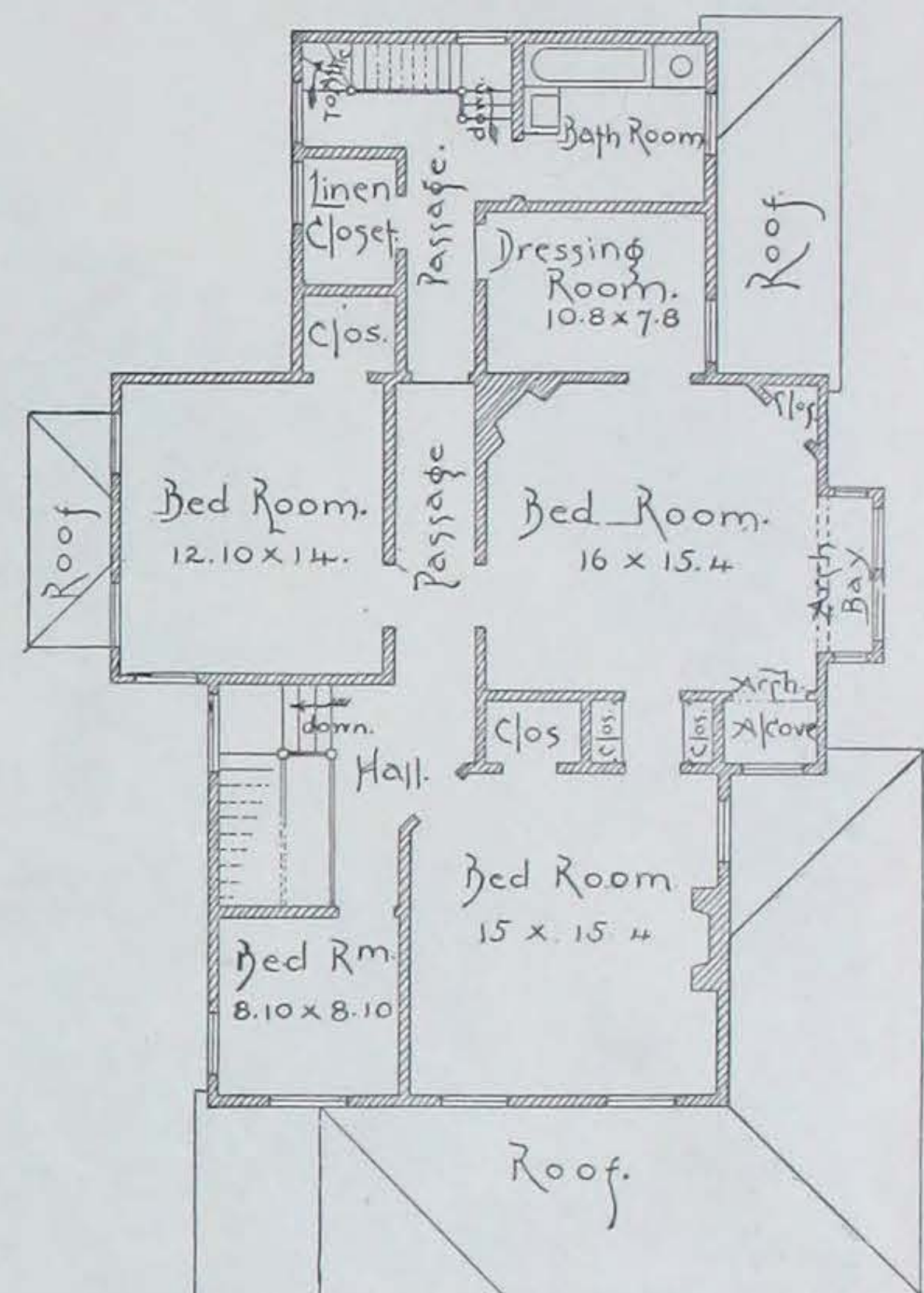
No swinging doors on the first floor, all the openings wide, with sliding doors.

Ample veranda, large fireplaces, large window openings, abundance of closets, a dressing-room off the principal bed-room, and a back stairway from cellar to attic.

Four good rooms are available in the attic.
Heated by steam or furnace.



FIRST FLOOR. NO. 301



SECOND FLOOR. NO. 301

DESCRIPTION OF DESIGN NUMBER 302

SIZE OF STRUCTURE: Front, 31 ft., 6 in. Side, 53 ft., not including veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft., 6 in.; First Story, 10 ft. Second Story, 9 ft.; Third Story, 7 ft., 6 in.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, clapboards and shingles; Gables, half timbered and cement; Roof, shingles.

COST: \$4,500, complete, except heating apparatus, mantels and kitchen range.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

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Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—The exterior of this design also is similar in appearance to Number 300, but reversed.

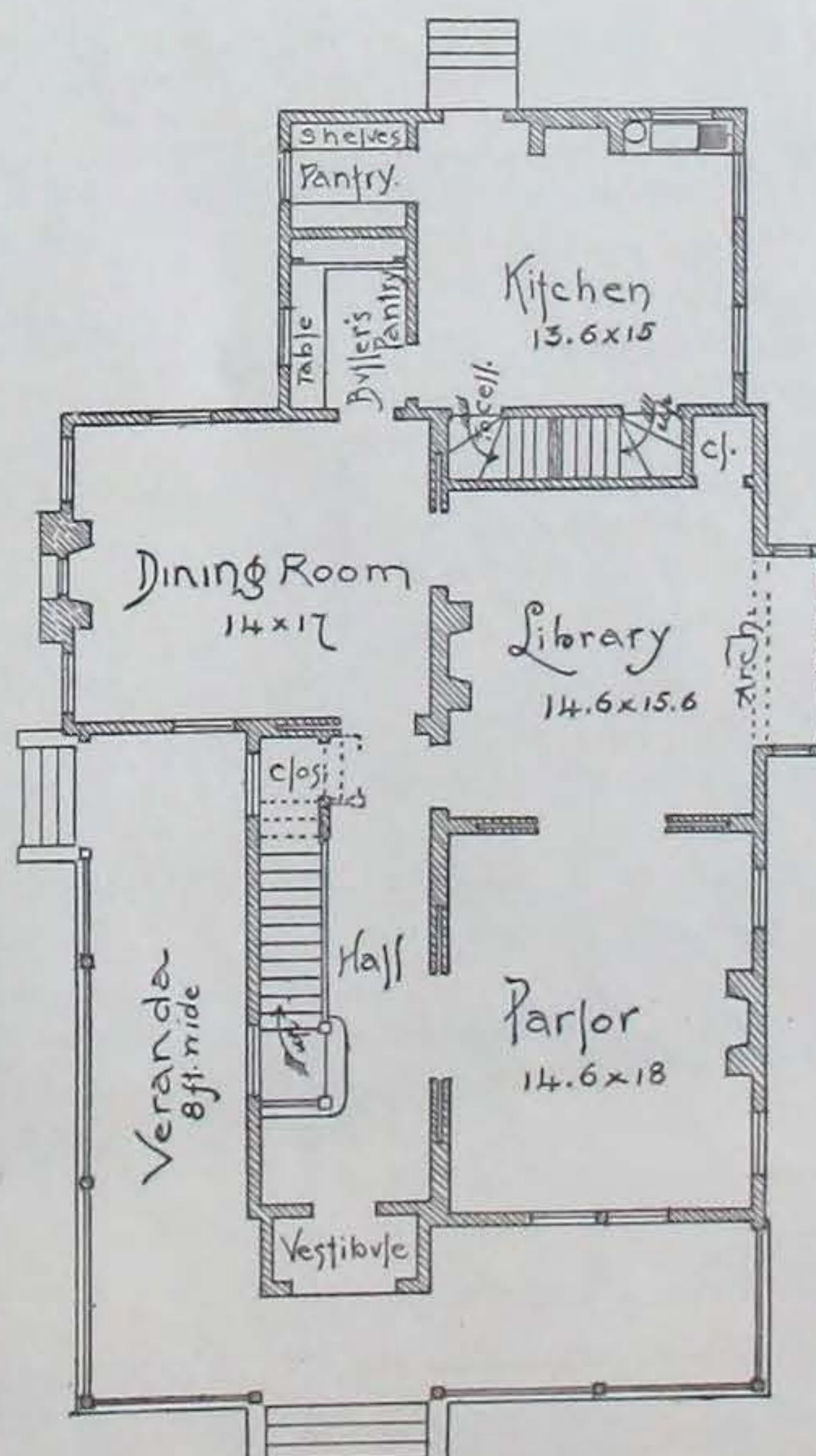
Cellar under the whole house.

Back stairway continuous from cellar to attic.

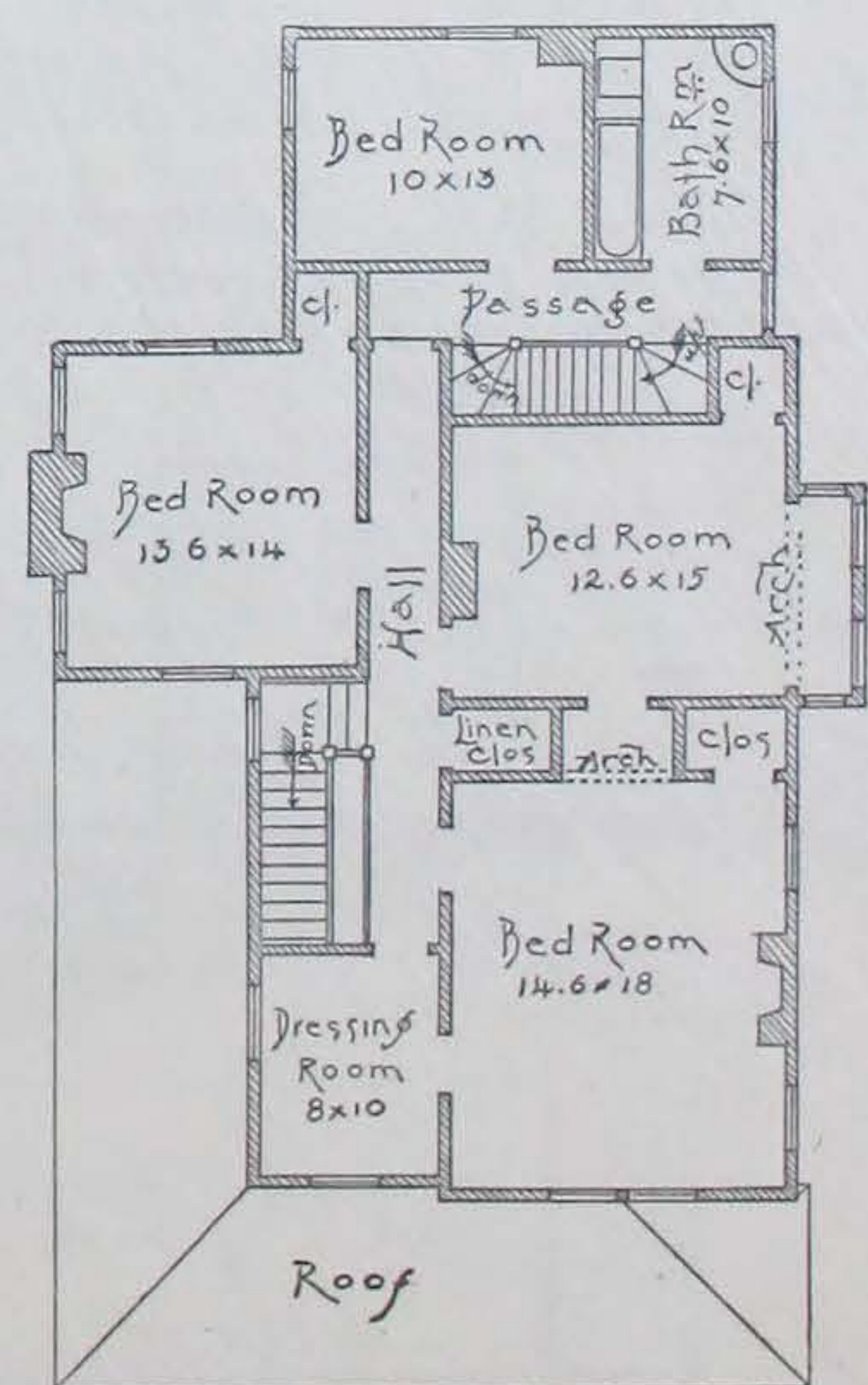
Sliding doors to all rooms on the first floor. Substituting portières or folding doors would reduce cost.

A pretty feature of the dining-room is a fireplace with a stained-glass window over the mantel-shelf. The chimney is carried up outside of house, and makes a striking appearance in the gable.

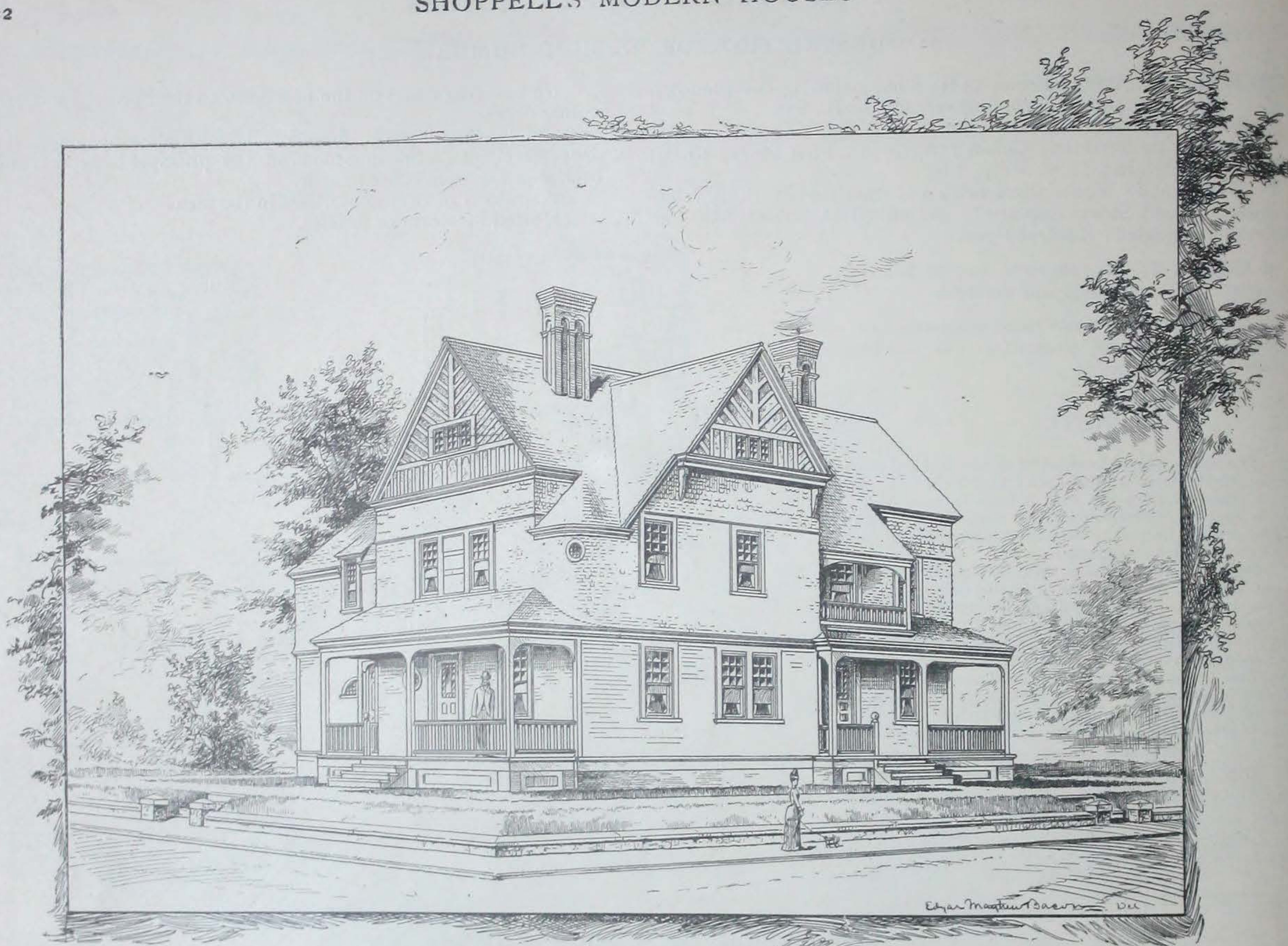
Three rooms in attic. Laundry under the kitchen.



FIRST FLOOR. NO. 302



SECOND FLOOR. NO. 302



DOUBLE HOUSE DESIGN No. 303. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 303

SIZE OF STRUCTURE: Front, 51 ft.; including veranda, 57 ft., 4 in.
Side, 41 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft.; Second Story, 8 ft.; Attic Story, 7 ft., 6 in.

MATERIALS: Foundation, stone and brick; First Story, clapboards, Second Story, shingles; Gables, shingled and half timbered; Roof, shingles.

COST: \$5,500, complete, except mantels and kitchen ranges.

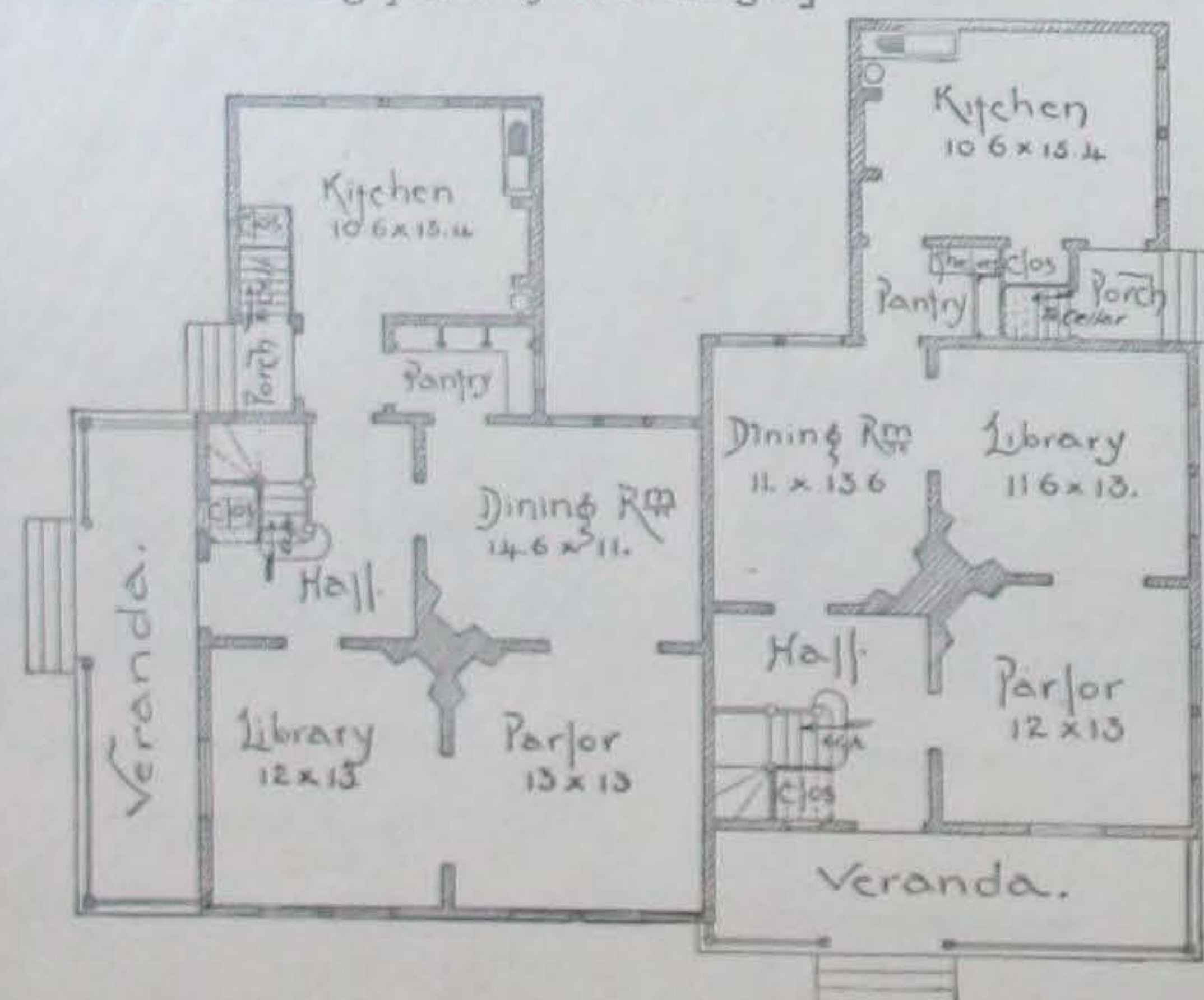
[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—Cellar under the whole structure. Three rooms can be finished in the attic of each house.

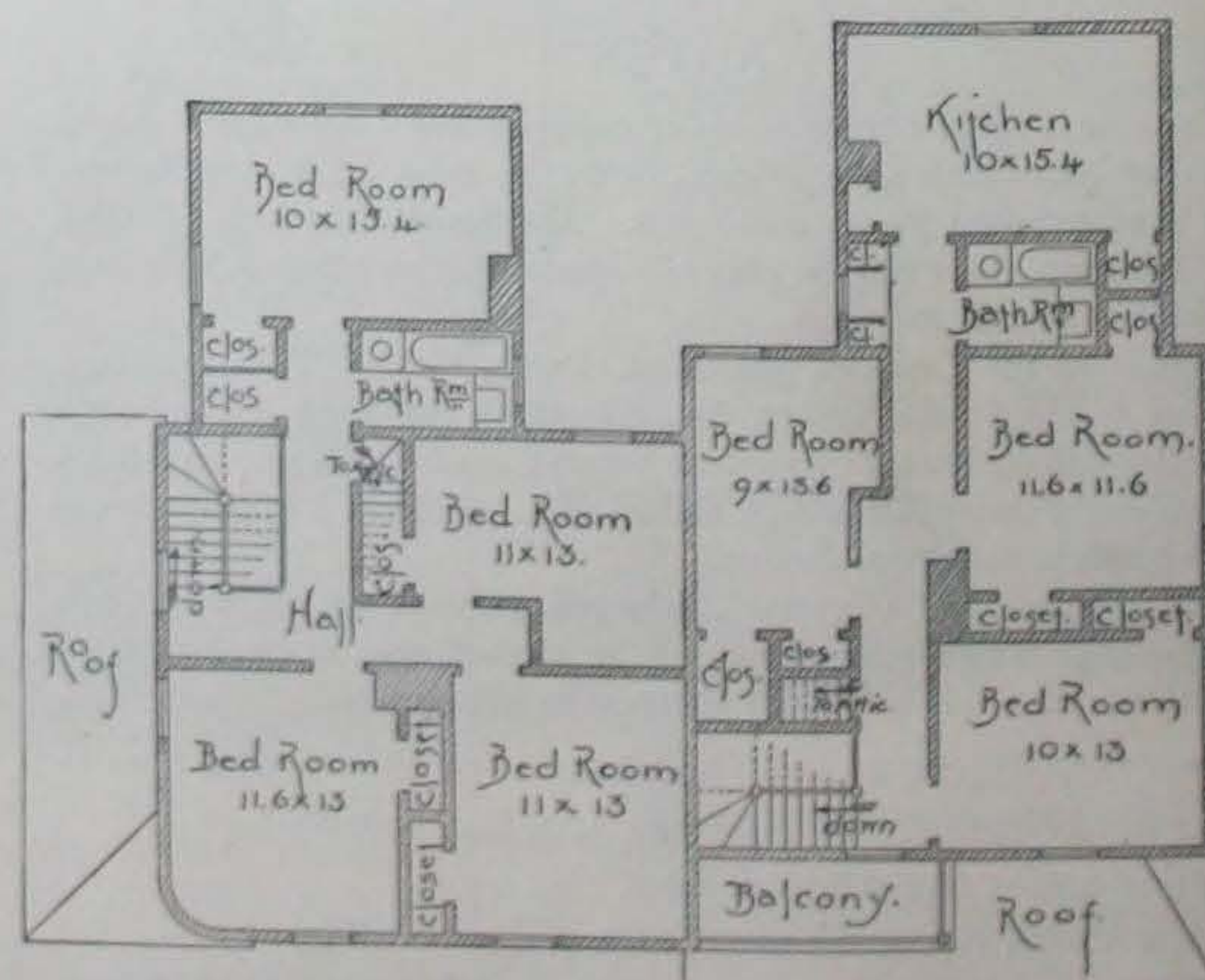
While each house is separate and complete in itself, the exterior effect is such as to give the impression of a single commodious and handsome residence. Built on a corner, gives each house a front.

This is a good design for brothers-in-law and intimate friends, or for city people who contemplate moving into the country, but who are afraid that it will be "so lonely at night."

A hall fireplace and mantel could be added to each house for an additional \$100.



FIRST FLOOR OF DOUBLE HOUSE. NO. 303



SECOND FLOOR OF DOUBLE HOUSE. NO. 303



DESIGN No. 304. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 304

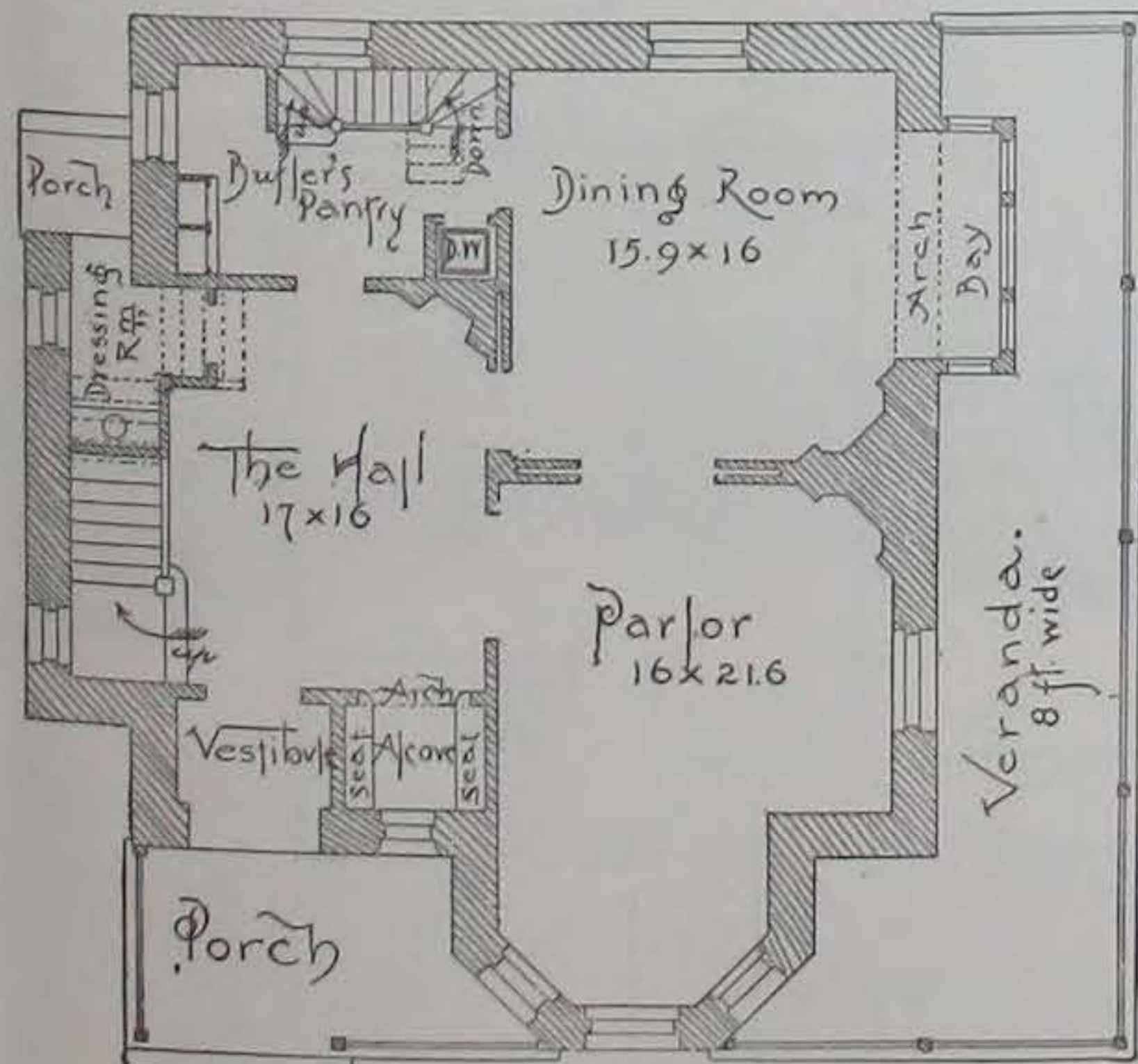
SIZE OF STRUCTURE: Front, 33 ft.; including veranda and staircase extension, 45 ft., 6 in. Side, 42 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Basement, 8 ft., 6 in.; First Story, 10 ft.; Second Story, 9 ft.; Third Story, 8 ft.

MATERIALS: Foundation, stone; First Story, stone; Second Story, shingles; Gables, half timbered and cemented; Roof, shingles.

COST: \$6,000, complete, except heating apparatus and mantels.



FIRST FLOOR. NO. 304

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—This house was designed for sloping ground, allowing a sufficient height for a kitchen and laundry in the basement. There is also a very large furnace and coal-cellar, and a separate cellar for vegetables and the like; also a

dumb-waiter service from kitchen to butler's pantry. The staircase leading from basement to butler's pantry is entirely separate from the kitchen, and is continued to the attic.

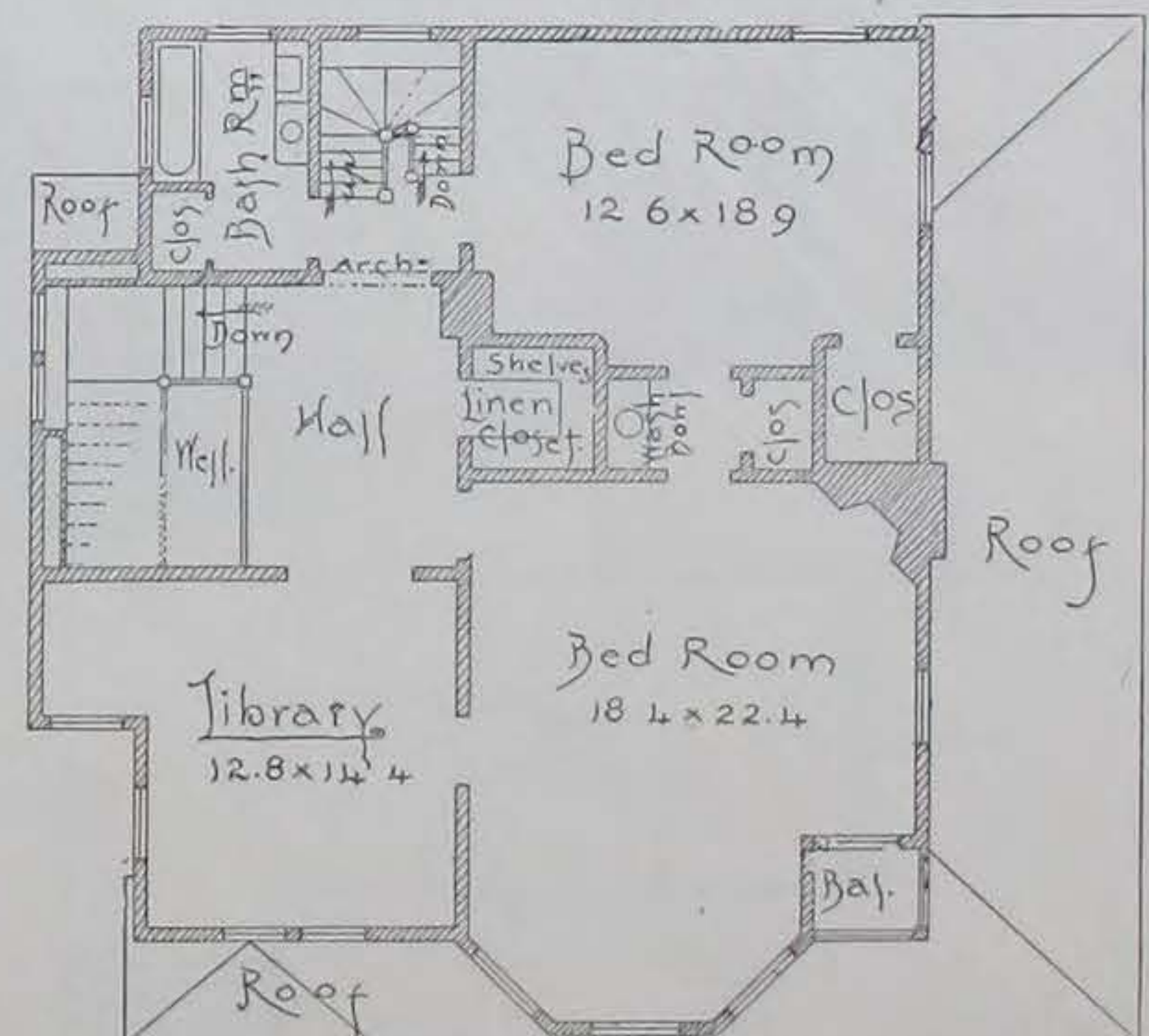
The fine hall, with its oak staircase, makes one of the handsomest rooms. The hall alcove is a charming lounging-place. There is a wide portière between the hall and parlor, sliding doors between parlor and dining-room, and between hall and dining-room.

Under the main staircase, with an entrance from a side porch, is a small dressing-room, fitted with a wash-bowl, which is supplied with running water, making a convenience which is appreciated by the amateur gardener.

The hall and staircase are lighted by windows glazed with stained glass.

In the attic there is a large hall, three bed-rooms and store-room.

Upon level ground the arrangement of the rooms could be preserved by adding a kitchen extension.



SECOND FLOOR. NO. 304



DESIGN No. 305. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 305

SIZE OF STRUCTURE: Front, 58 ft. Side, 36 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 12 ft.; Second Story, 11 ft.

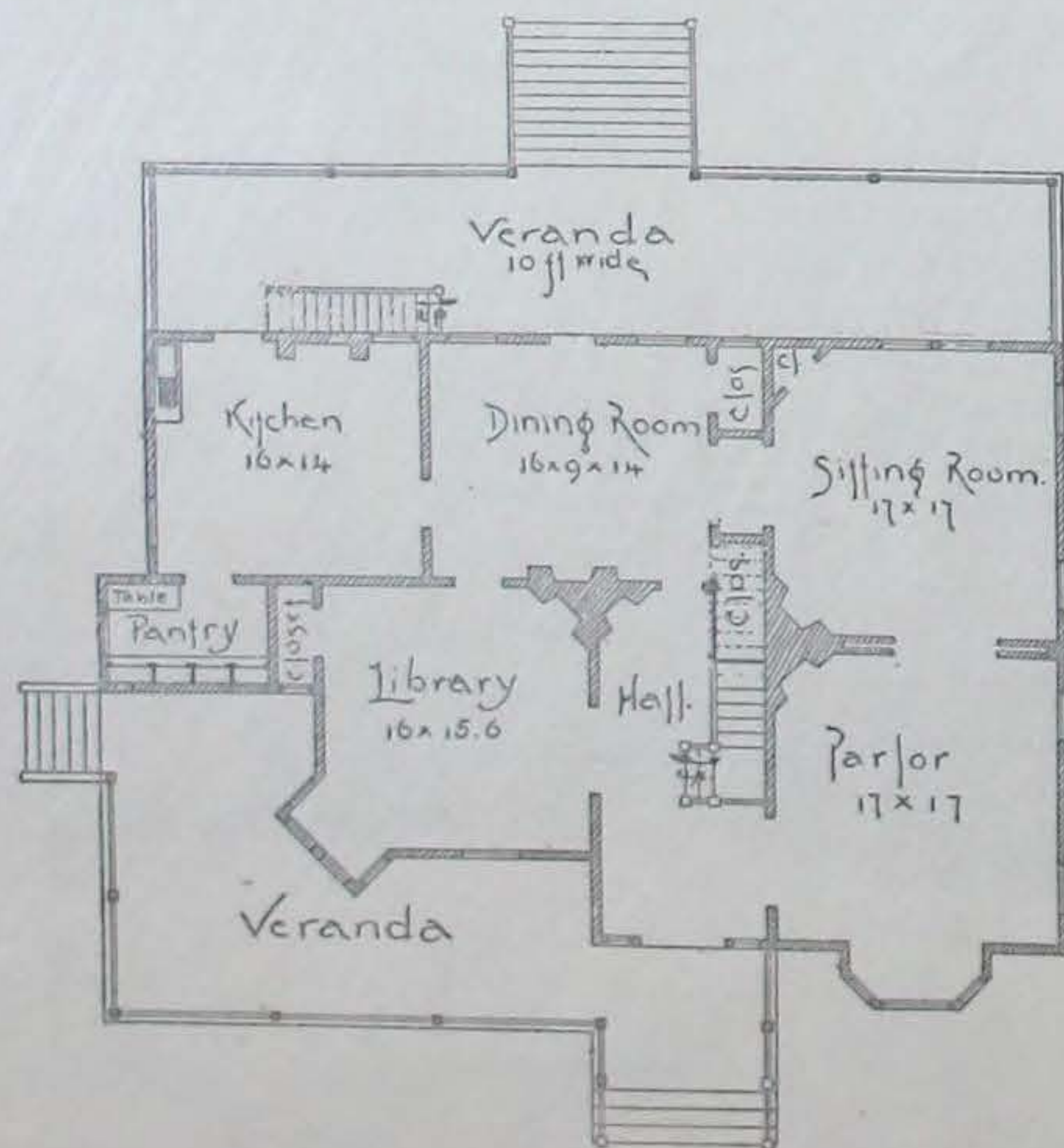
MATERIALS: Foundation, brick piers; First Story, clapboards; Second Story, shingles; Roof, shingles.

COST: \$7,000, complete, except mantels.

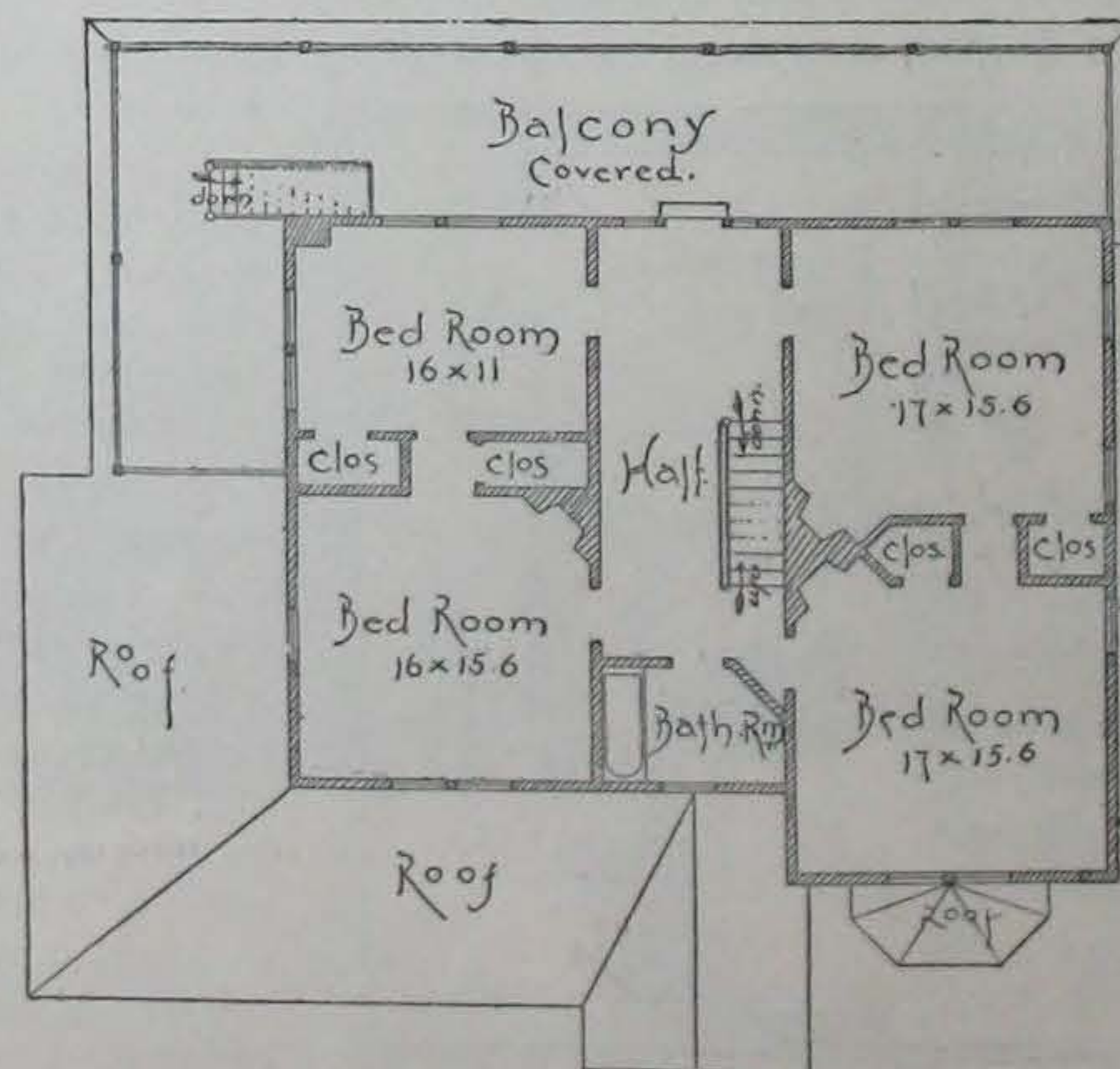
[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—This house was built in the South. It has high ceilings, immense verandas and balconies, large rooms and a generous expansiveness throughout. It has no cellar, but one can be built under the rear part, with entrance under the veranda stairway.

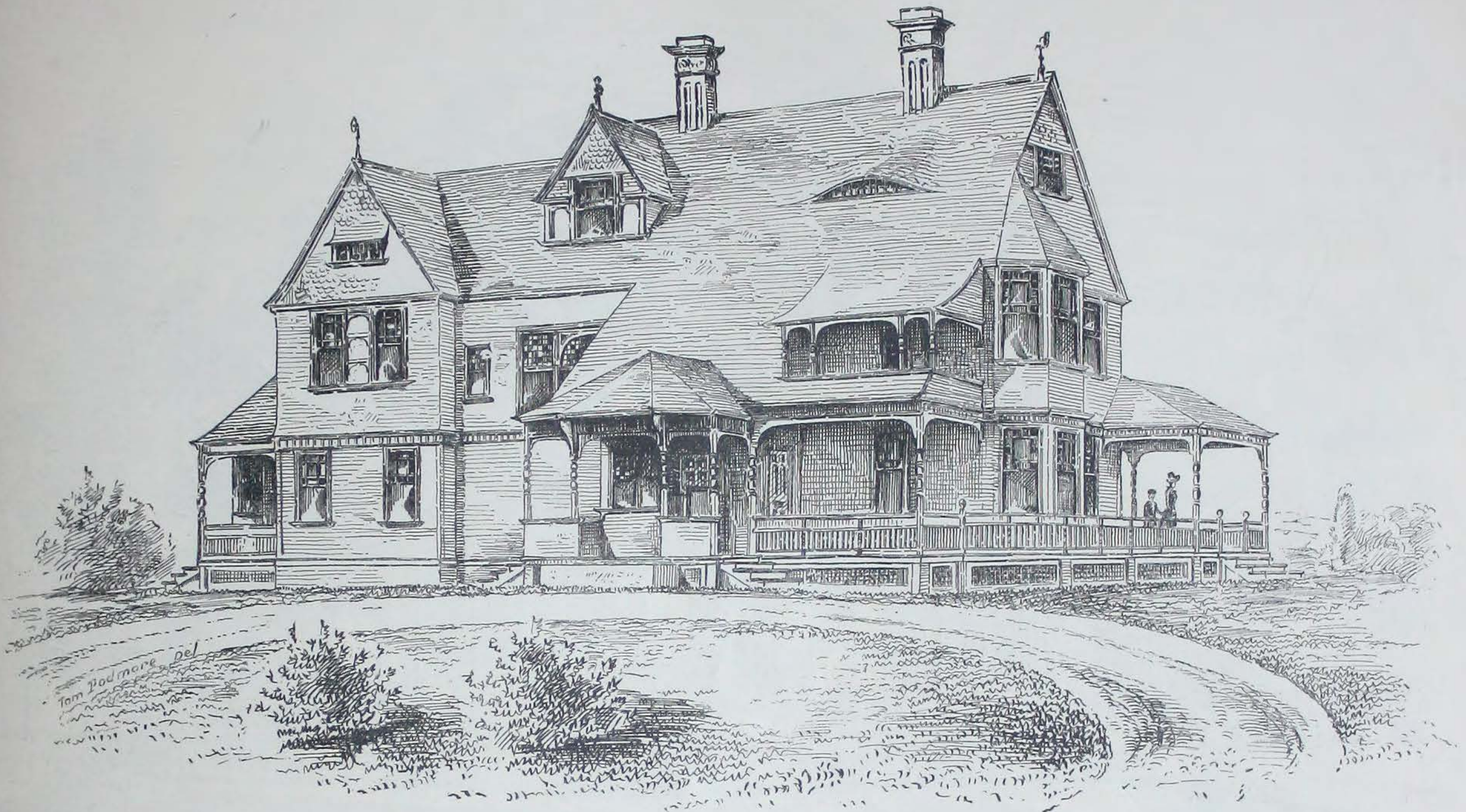
The attic contains four large bed-rooms and a hall.



FIRST FLOOR. NO. 305



SECOND FLOOR. NO. 305



DESIGN No. 306. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 306

SIZE OF STRUCTURE: Front, 78 ft., 6 in. Side, 28 ft., 6 in.; including veranda, 50 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft., 6 in.; First Story, 10 ft.; Second Story, 9 ft., 6 in.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$7,000, complete, except heating apparatus and mantels.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

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Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase,

Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Cellar under the hall, library, drawing and dining-rooms.

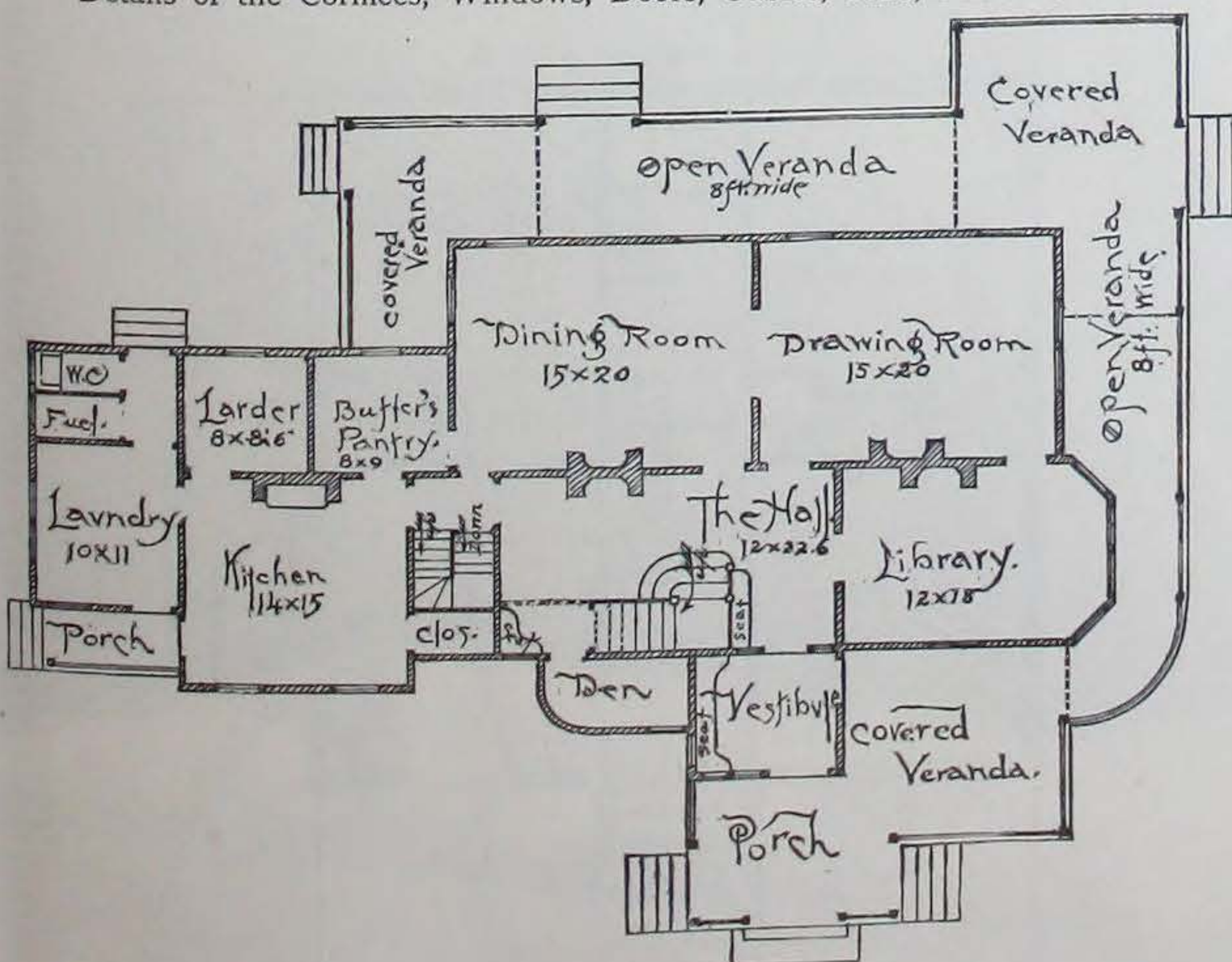
Heated by steam.

Open fireplaces in all the principal rooms.

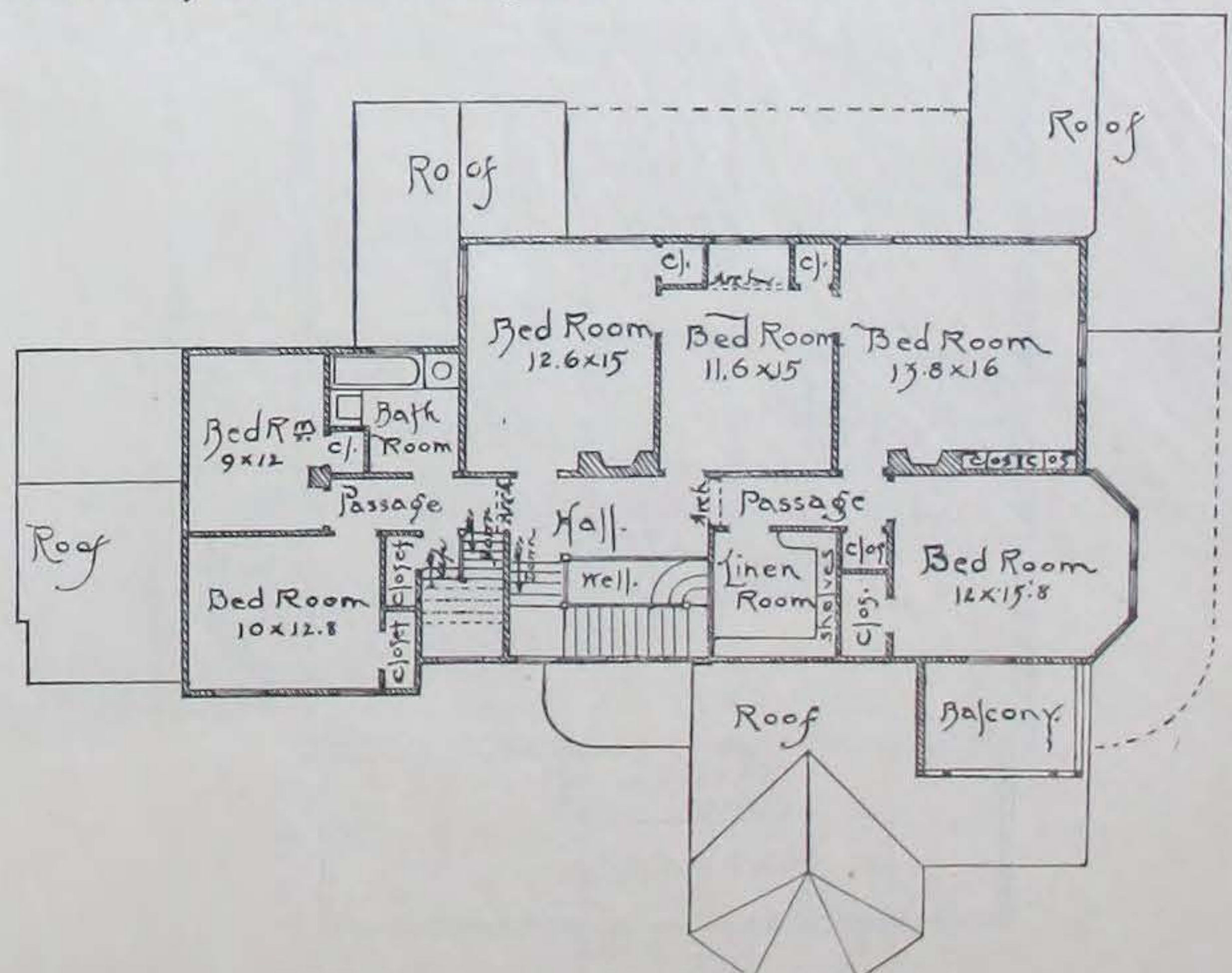
Ample closet room a feature. Children's play-room of large size, and four bed-rooms in the attic.

Immense verandas, part of them uncovered, in order not to wholly obstruct the sunlight.

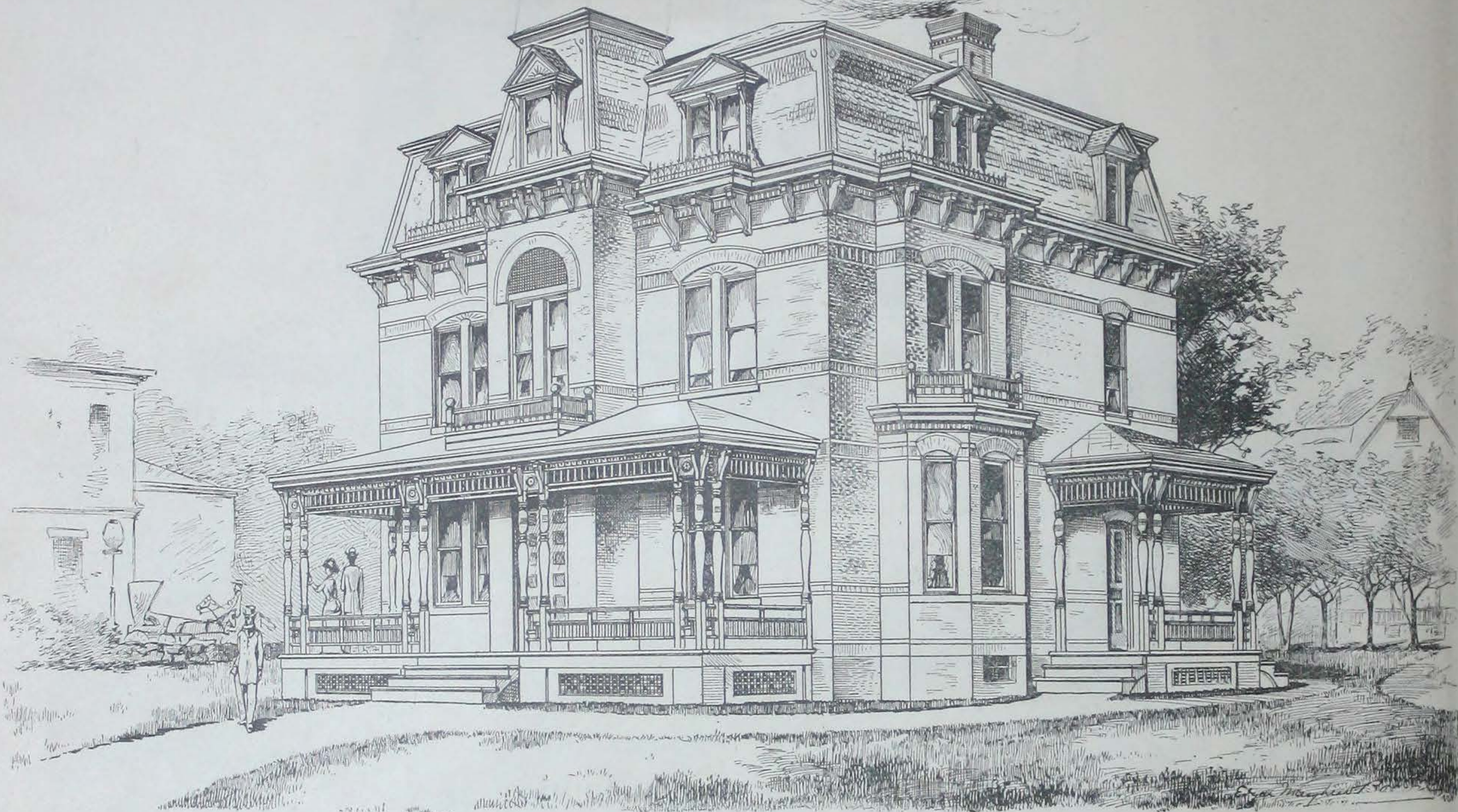
A country house of this size needs little or no ornamentation. It can be finished plainly but substantially throughout. Its size and beauty of outline distinguishes it and makes it attractive.



FIRST FLOOR. NO. 306



SECOND FLOOR. NO. 306



DESIGN No. 307. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 307

SIZE OF STRUCTURE: Front, 42 ft., 8 in. Side, 41 ft., 8 in., not including front veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 12 ft.; Second Story, 10 ft.; Attic Story, 9 ft.

MATERIALS: Foundation, stone and brick; First Story, brick; Second Story, brick; Roof, slate? dectinned.

COST: \$9,000, complete, except mantels and heater.

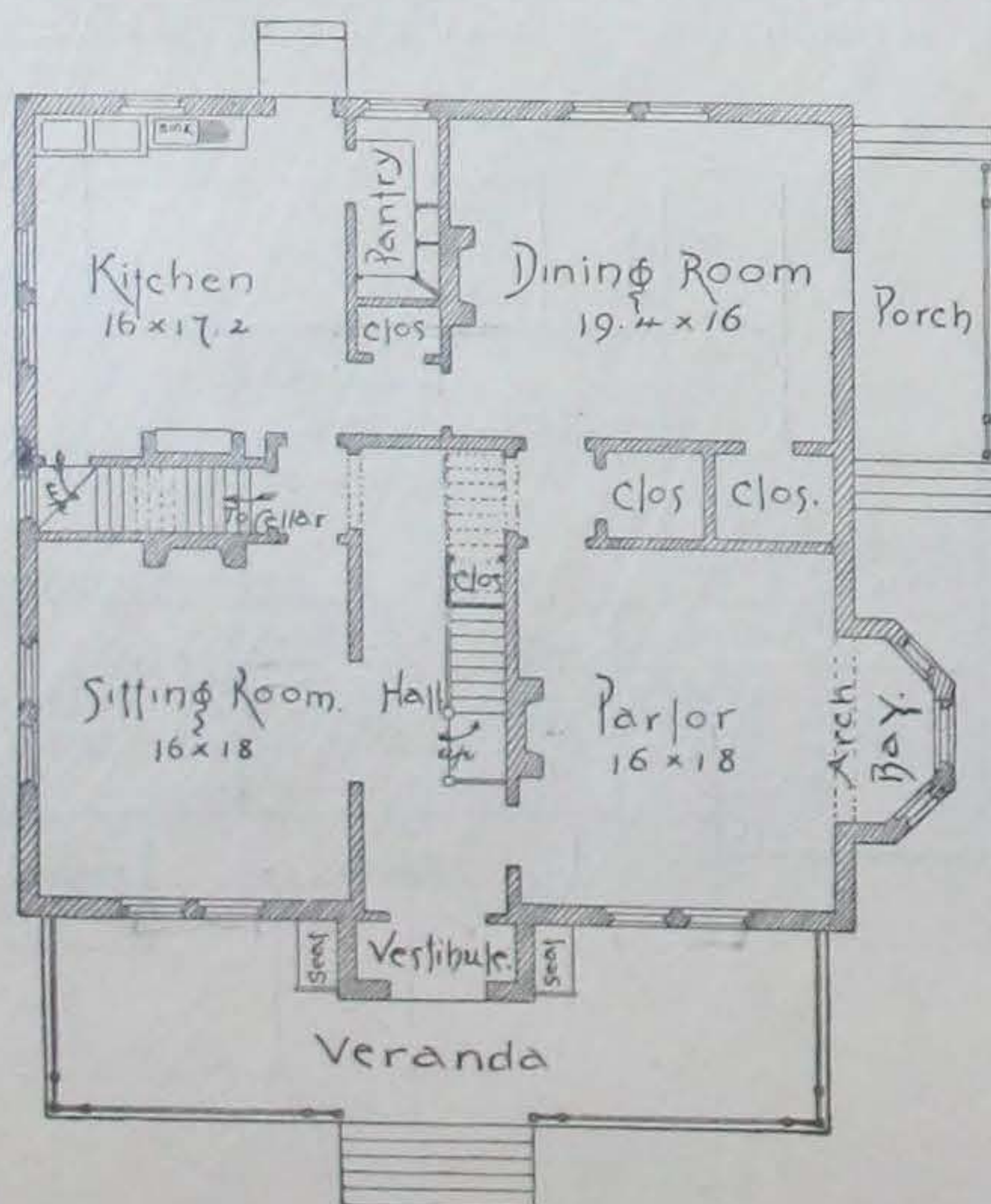
[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—Cellar under half of house. Heated by furnace or steam.

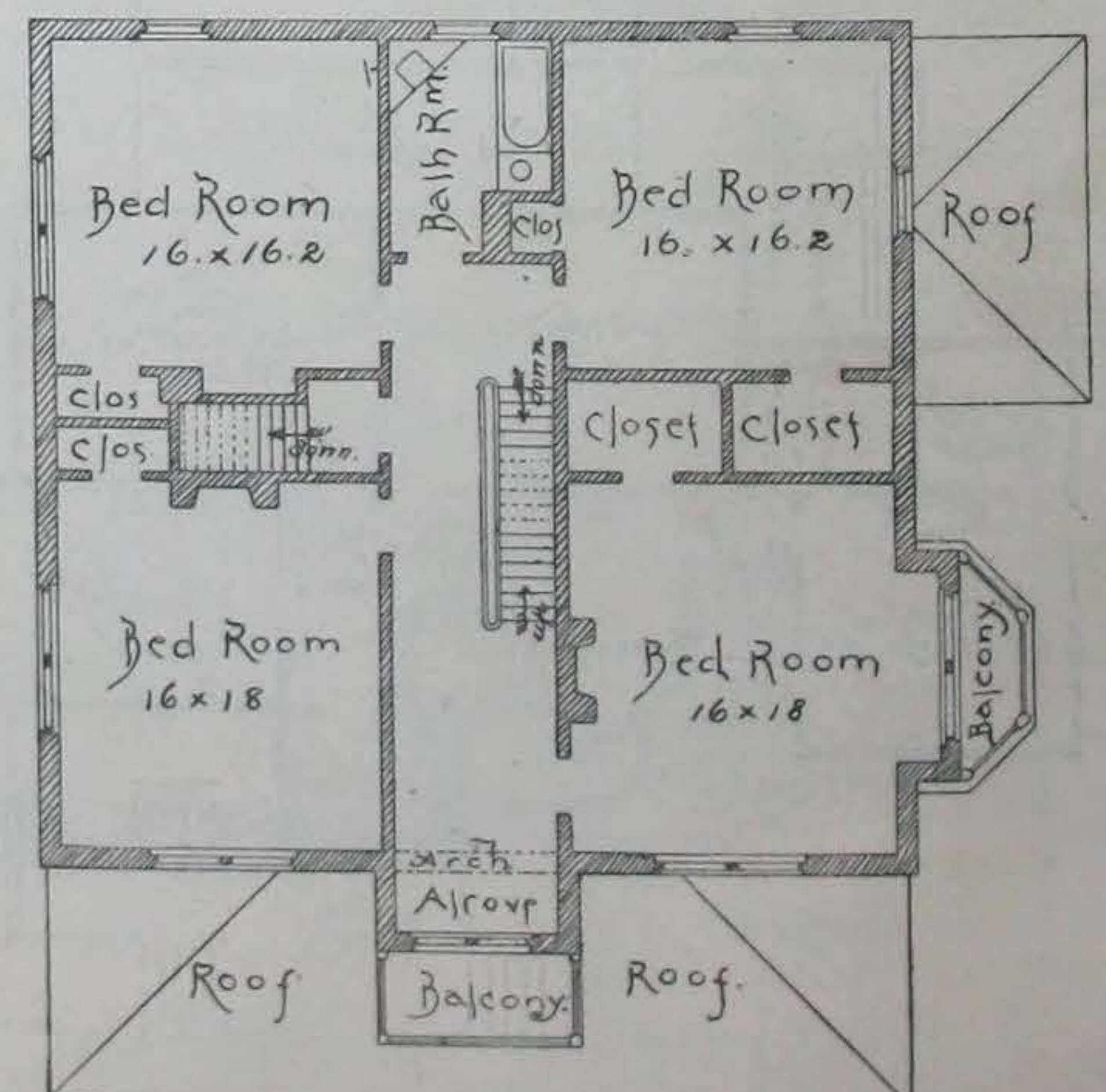
The attic or third floor contains the same number of rooms, with the same arrangement, as the second floor.

The details of the veranda and other parts of this house are very handsome.

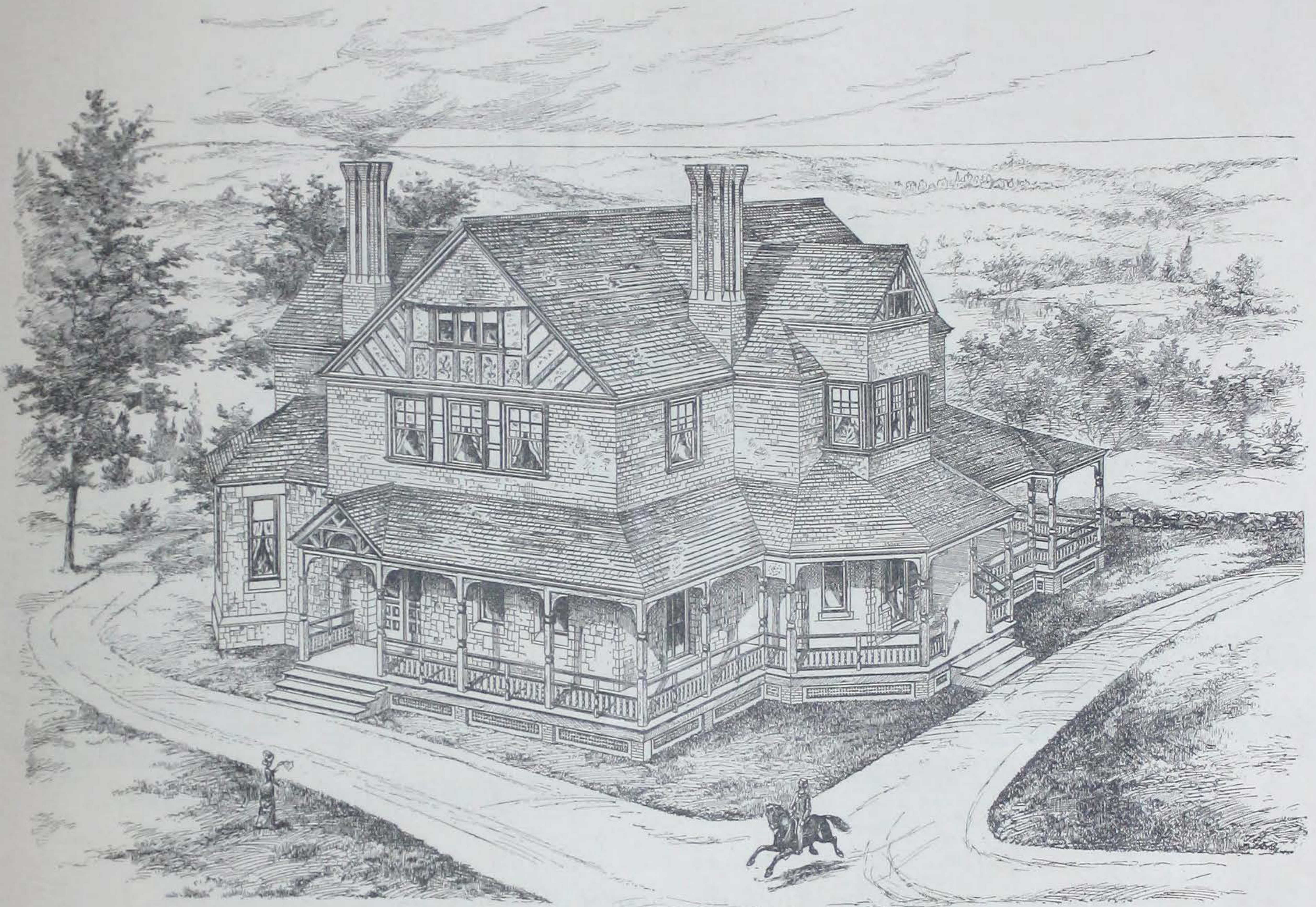
From an artistic point of view, we do not admire the Mansard or French roof, yet it has some advantages over other forms; it gives a third story of equal size and accommodation as the second story. In a gabled or hipped roof the attic rooms are greatly diminished in size by the slant of the roof. Where a large number of bed-rooms are required the Mansard roof will supply them.



FIRST FLOOR. NO. 307



SECOND FLOOR. NO. 307



DESIGN No. 308. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 308

SIZE OF STRUCTURE: Front, 63 ft., 6 in., including veranda. Side, 65 ft., 6 in., including veranda.

SIZE OF ROOMS: See floor plans.

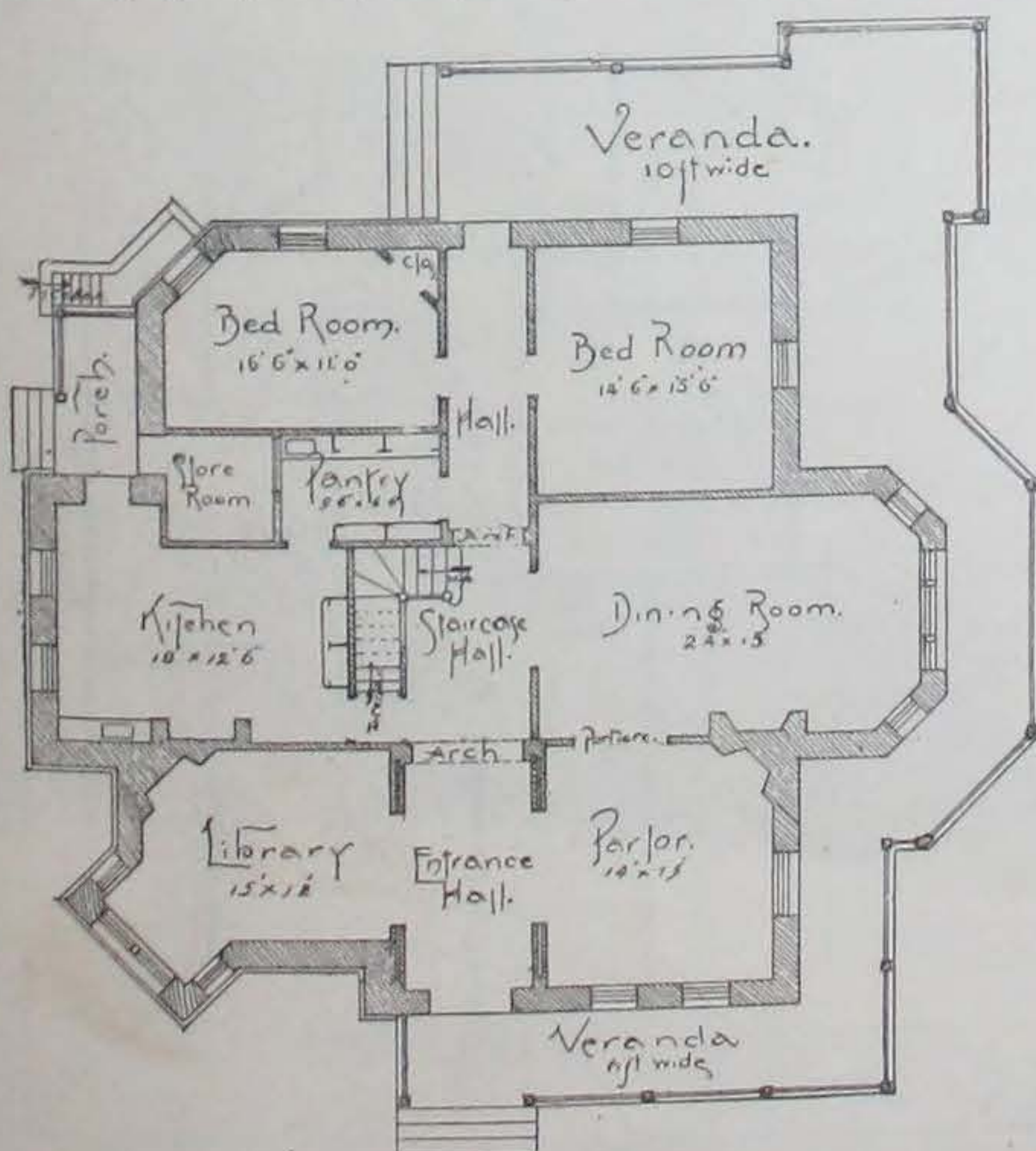
HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft.; Attic, 7 ft., 6 in.

MATERIALS: Foundation, stone; First Story, stone; Second Story, frame, shingled; Gables, timber and cement; Roof, slate.

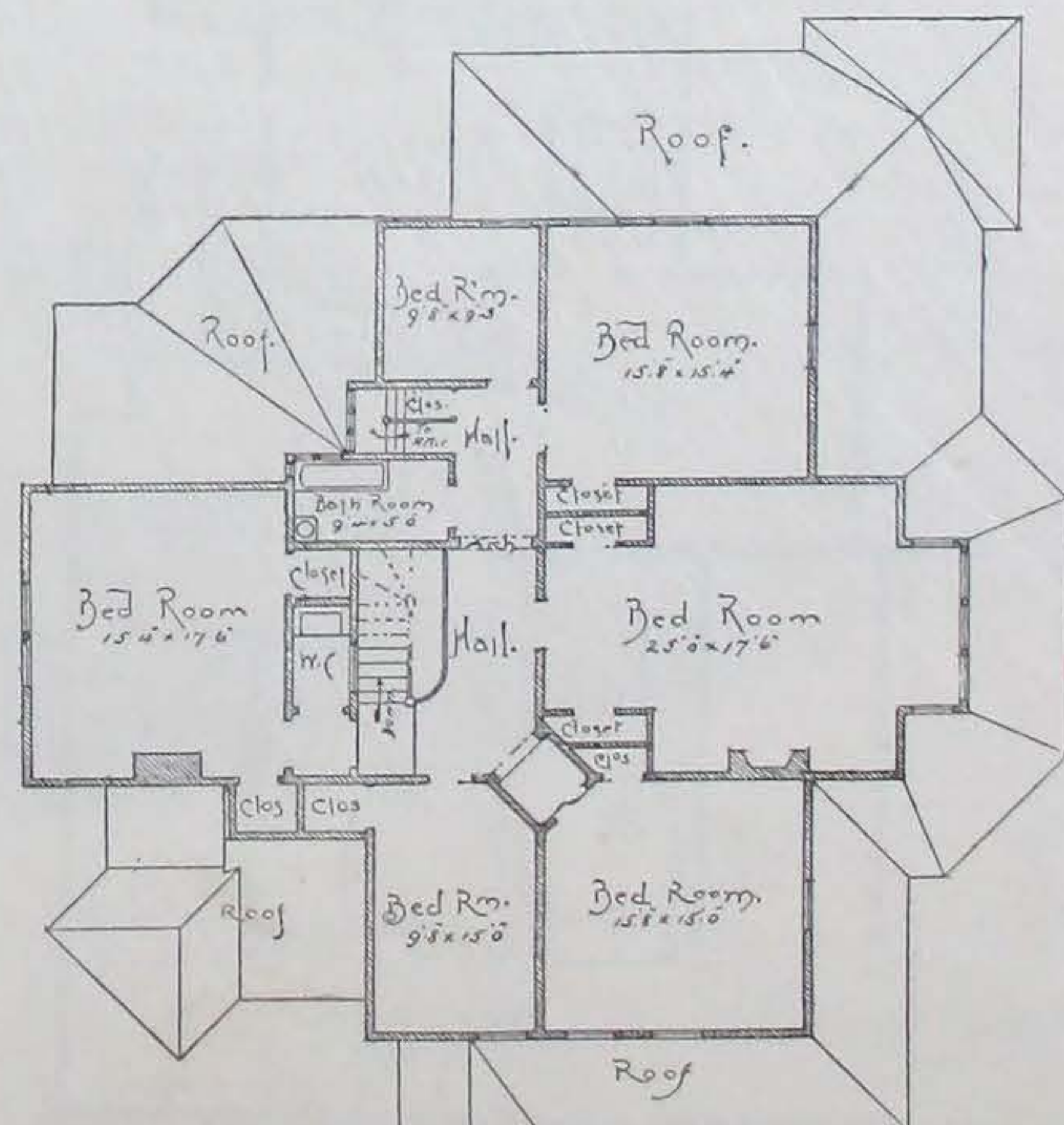
COST: \$6,500, complete, except mantels and furnace.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—The immediate front portion of the house is not excavated; the remainder is. One well-lighted and comfortable room in the basement is finished and fitted up for a man servant. Large fireplaces. Large skylight in roof gives light to the staircase hall; stained glass in ceiling over second-story hall. Four good rooms in the attic. Very fine veranda. Cellar floor concreted. Sliding doors between hall and library, and hall and parlor.



FIRST FLOOR. NO. 308



SECOND FLOOR. NO. 308



DESIGN No. 309. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 309

SIZE OF STRUCTURE: Front, 27 ft., 6 in.; including veranda, 43 ft., 6 in. Side, 55 ft., 10 in.; including veranda, 67 ft., 8 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 11 ft.; Second Story, 10 ft.; Third Story, 8 ft., 6 in.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles; Gables, shingles, half timber and Portland cement work; Roof, slate.

COST: \$6,000, complete, except heating apparatus and mantels.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

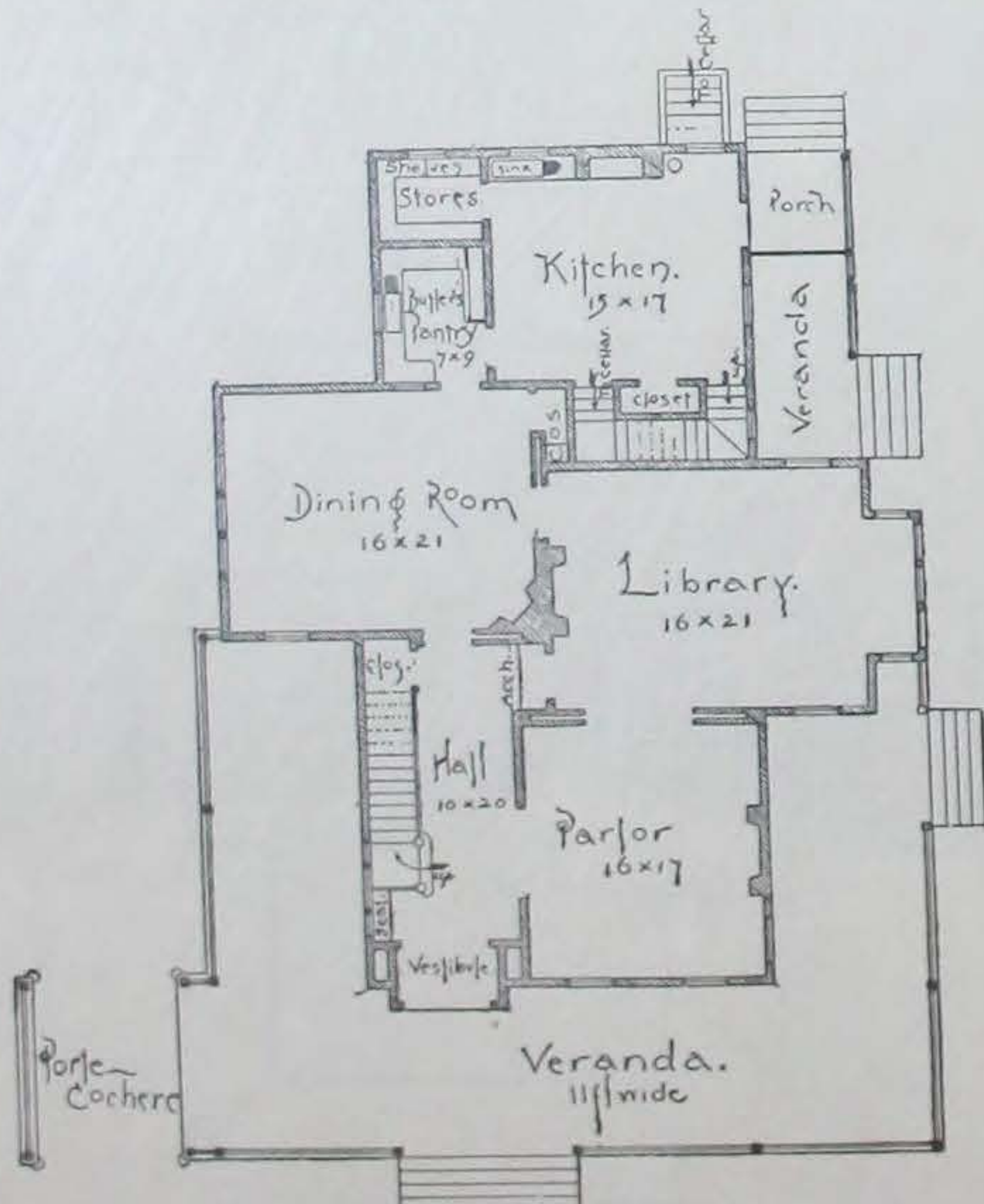
SPECIAL FEATURES.—Cellar under the whole house, with inside and outside stairways thereto.

In the attic there are three bed-rooms, and a billiard-room 16x21, which is perfectly and fully lighted.

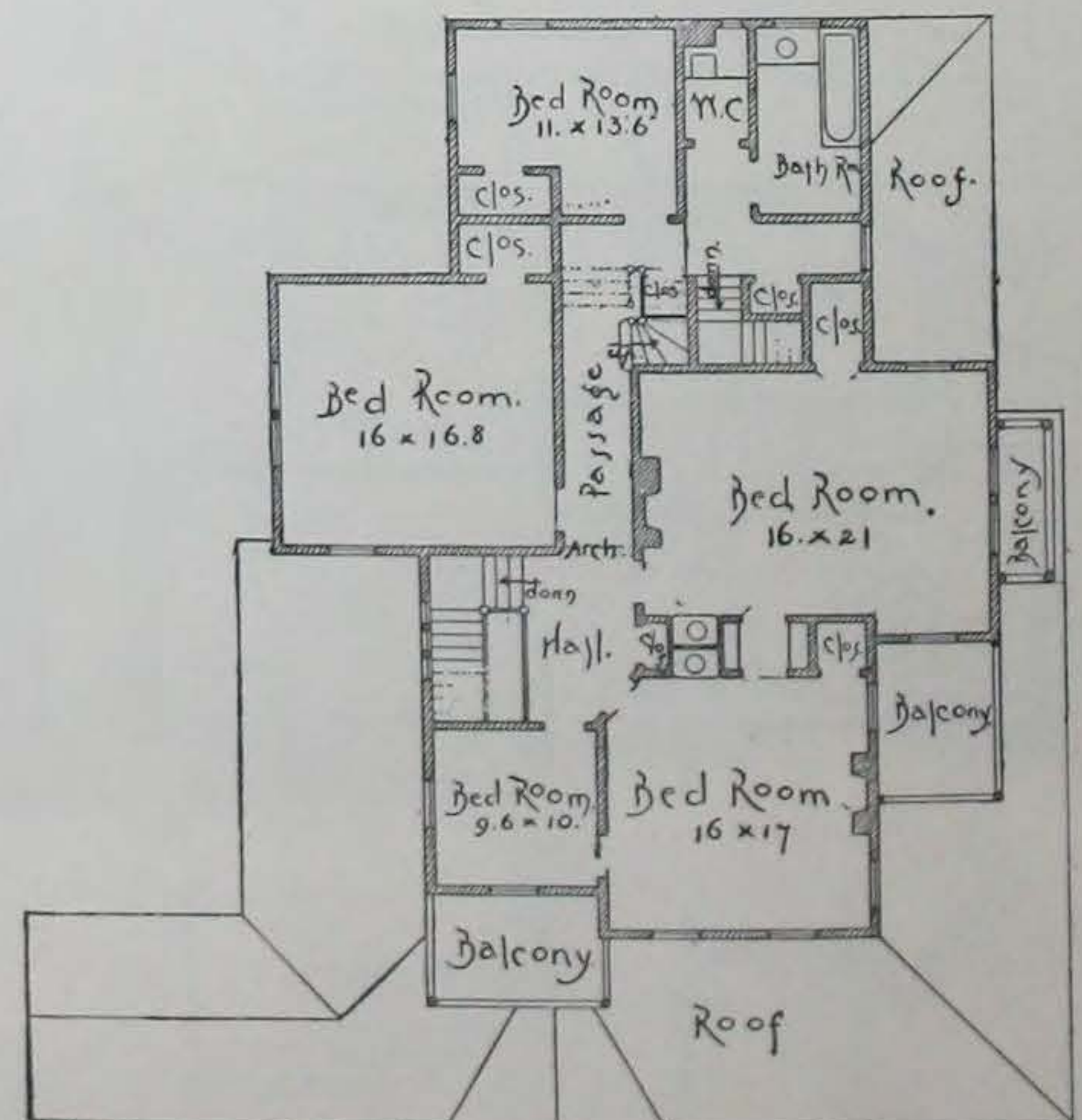
The windows lighting the staircase are glazed with stained glass in lead bars. The vestibule door also has stained glass.

An abundance of closets on the second floor, and wash-bowls in the two principal bed-rooms.

Fine balconies, an immense veranda, and a porte-cochere.



FIRST FLOOR. NO. 309



SECOND FLOOR. NO. 309



CARRIAGE-HOUSE AND STABLE DESIGN No. 310. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 310

SIZE OF STRUCTURE: Front, 24 ft. Side, 40 ft.
 SIZE OF ROOMS: See floor plans.
 HEIGHT OF STORIES: First Story, 10 ft.; Second Story extends to rafters.
 MATERIALS: Foundation, stone; First Story, clapboards; Second Story, clapboards; Roof, shingles.
 COST: \$750, complete.
[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

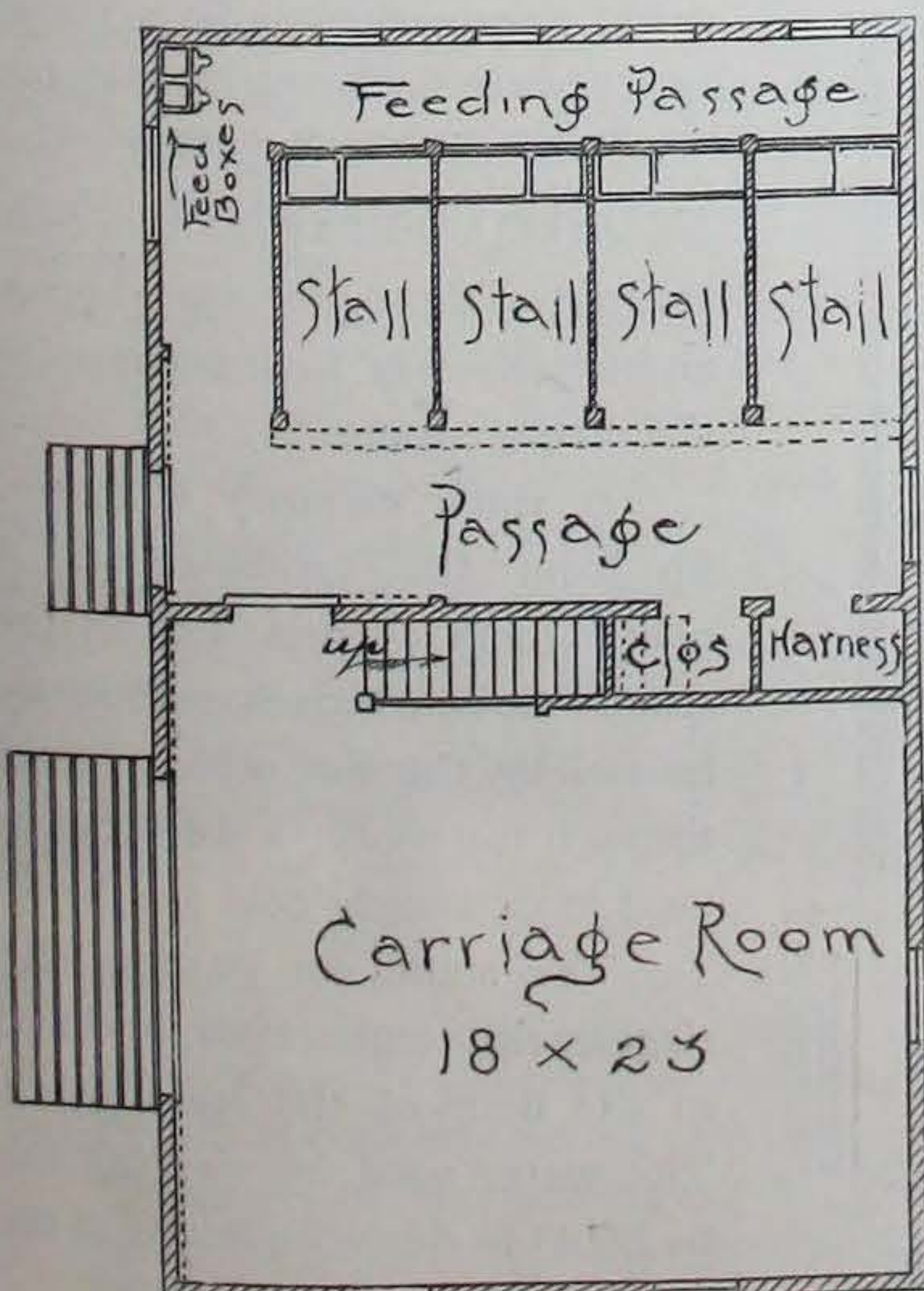
NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

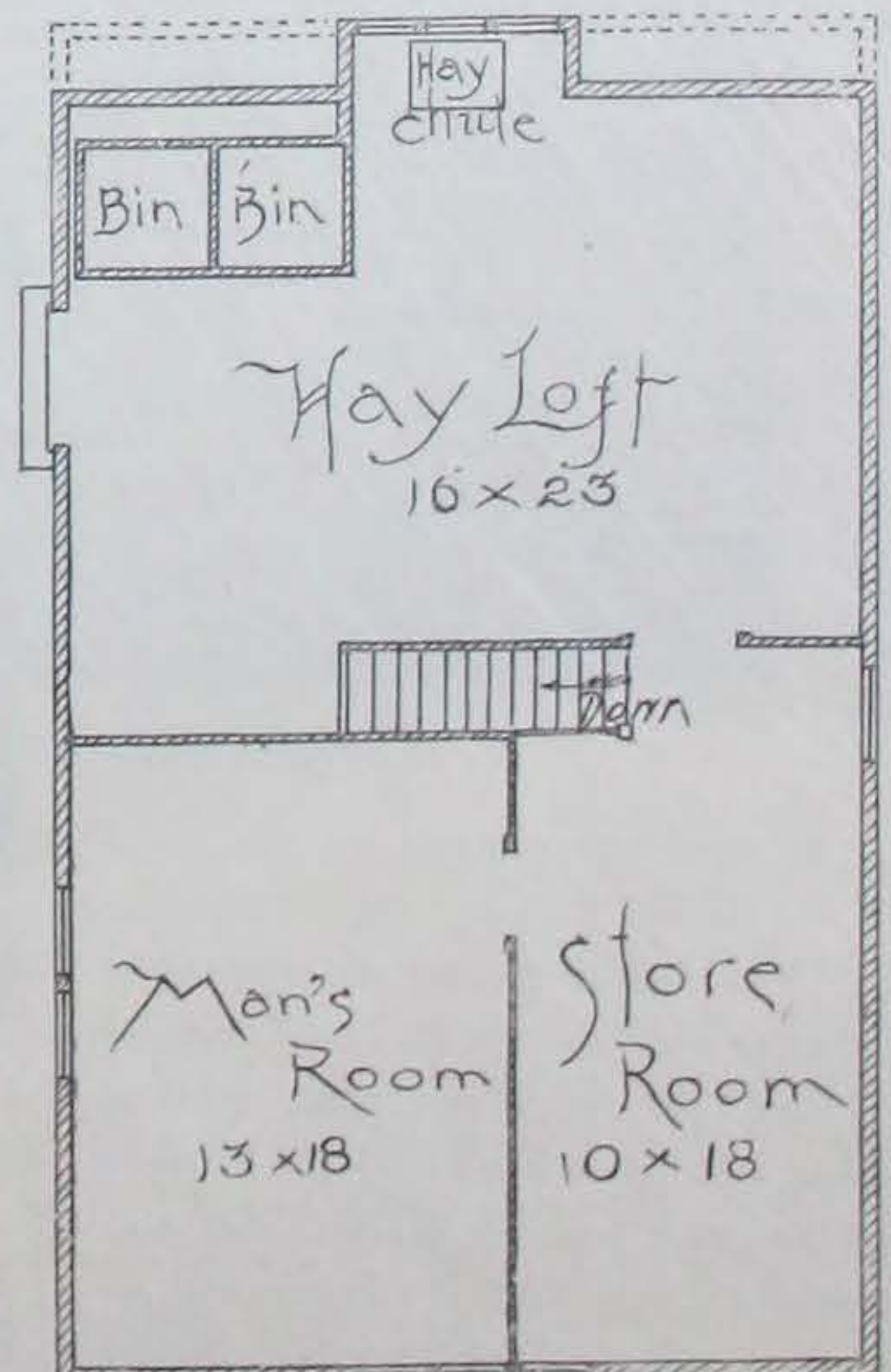
Details of the Cornices, Windows, Doors, Gables, Colors, &c., &c., are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Stalls for four horses, feeding passage-way, harness closets and large carriage room. On the second floor a room for the coachman, large hay-loft and a store-room.



GROUND FLOOR. NO. 310



SECOND FLOOR OR LOFT. NO. 310



CARRIAGE-HOUSE AND STABLE DESIGN No. 311. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 311

SIZE OF STRUCTURE: Front, 39 ft., 6 in. Side, 36 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 11 ft.; Second Story, from floor to highest point, 12 ft.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$1,500, complete.

[See page 75 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, March, 1886. In most other localities the cost is less—in some places much less. A different date also modifies cost. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

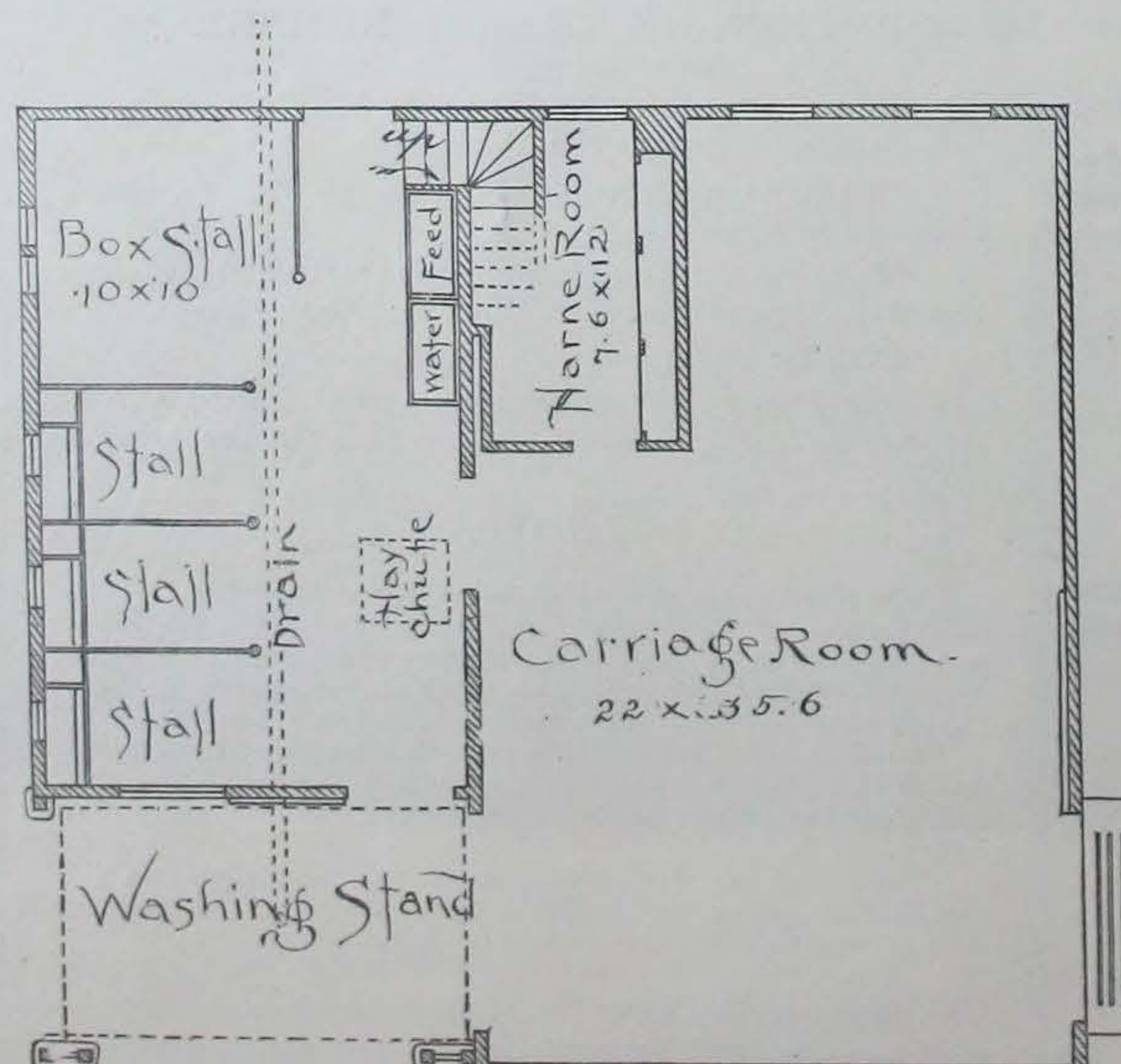
Details of the Cornices, Windows, Doors, Gables, Colors, &c., &c., are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.— Stall accommodations for four horses, and for three or four carriages in the carriage-room.

A small chimney is carried up from the harness-room. A man's room is provided on the second floor, which is sufficiently heated by the flue which passes through the room; a stove can be used in extremely cold weather.

The stand for washing carriages, with cement floor, is placed in the floor of the open porch. The water used for washing can be made to flush the drains of the stable.



GROUND FLOOR, NO. 311

THE HABITATIONS OF MAN IN ALL AGES

By VIOLLET-LE-DUC

Translated by BENJ. BUCKNALL, Architect

CHAPTER V

THE EMIGRANTS

THE sun was sinking on the horizon. At the entrance of a wide valley on an undulating plain were to be seen a long train of men on foot and on horseback, coming down the lower slopes of the mountains through the woodlands and prairies; behind them were heavy wagons drawn by oxen, and filled with women, children, and furniture; while a dense body of horsemen brought up the rear.

The men in the rear of the column came to a stand in a wide turfey glade, formed in a circle, and gradually the wagons and their escort reached the centre, and were ranged in several lines. The horses were tied to trees or to stakes driven in the ground. The women and children got down from the wagons, and without losing time, set to work to prepare the evening meal. Fires were quickly lighted between the wagons, while the men took the yokes off their teams, and allowed the oxen to graze. The air was still, and the smoke from the various fires rose slowly to the sky like so many gray columns. The last rays of the sun gilded only the tops of the mountains, and the valley was already plunged in the blue shades of evening. Grave songs with long-drawn notes then rose from every quarter of the opening, and shortly after the company separated into groups around the fires.

The meal finished, night had supervened, and far away toward the extremity of the valley only a few summits still retained a purple tint. The moon was rising, and the night was mild. In the centre of the camp the emigrants assembled, and one of their number, mounted on a wagon, turning toward the star which appeared on the crest of the farthest hill to his left, gave out with a powerful voice a sacred hymn, commencing thus:

"The moon, pursuing her flight through the billows of air, moves onward in the sky. O beams of day, with golden trail, the eye cannot trace your path!" . . .

The people repeated each strophe in a full and simple melody.

When the hymn was finished, the women covered the wagons with woollen stuffs (fig. 16), and each family having retired within these movable dwellings, silence reigned in the camp.

A small body of men were watching around the glade, and keeping up a circle of fires, conversing in a low voice.

"Since we left our mountains we have not yet come up with the Dasyus; are they still at a considerable distance?"

"They are in the plain," returned another; "perhaps we shall see them to-morrow. They live there amid the riches of a fertile soil,—

those unclean beings; we will drive them away; we will take possession of the ground which they defile, for they are incapable of defending themselves against the Aryas; or we will make them work for our families. In these rich plains, we shall no longer have to protect ourselves against the snow; there will be no more long winters, no more devastating torrents."



THE ARVAN WAGON.—FIG. 16.

The first speaker was, however, looking in the direction of the mountain and sighing: "Wilt thou believe me," said he at last to his companion, "it seems to me as if when we left our mountain gorges, so difficult to descend, and where we had to help our wagons along with our arms, I had left a part of my own being up there; sadness overcomes me at sight of this boundless plain, and I seem to pant for air."

"We could not go back to our mountains; we have been vanquished by the great families from the North; they came down upon our pastures, and spread devastation everywhere when we tried to drive them back. More numerous than ourselves, these men were holding us in bondage. We are not made for subjection; we there-

fore had to leave our dwellings. Cease thy regrets. When a child, I came down with my father, who used to sell wool in these happy plains, where grow trees loaded with fruit, where the rivers flow gently through the shades; where man never suffers either from hunger or cold. The Dasyus have large and well-built houses, and flocks and herds in plenty. When all these possessions become ours, thou wilt forget thy hut on the mountain."

CHAPTER VI

EARLIEST SETTLEMENTS OF THE ARYAS ON THE UPPER AFFLUENTS OF THE INDUS

THE earliest emigrants who descended the slopes of the Himalayas found the region occupied by a race of men of yellow complexion, destitute of energy; and had no difficulty in subjugating them. Of great stature, handsome and brave, the Aryas presented themselves amidst these colored peoples like superior beings, born to command; and despite their number, the effort to resist was soon abandoned. Industrial occupations were, however, more fully developed in the plain among these peoples of inferior race than in the mountains. They worked metals, had a considerable stock of tools, fashioned wood, and knew how to make bricks and work stone. They employed painting to embellish their dwellings, and wove linen, cotton, and woollen stuffs of very fine texture, which they skilfully dyed.

When all efforts at resistance had been suppressed, the Aryas began to think of settling permanently in the conquered lands. But the dwellings of the conquered race, constructed of bricks and canes, light and unsubstantial, were unsuited to the new-comers, who required substantial weather-proof houses, capable on occasion of resisting attack.

The predilection for durability, innate in the Arya, was intolerant of dwellings which a puff of wind might carry away. They compelled the natives, therefore, to erect habitations for them more durable than those of the country; but disdaining manual labor, they gave only general orders, involving conditions of increased stability—leaving their execution to the natives. The latter were therefore obliged to make use of the forms with which they were acquainted, while employing stronger materials and a more durable system of structure. And such is the force of habit, that the new-comers insisted on the reproduction of certain appearances with which they were familiar, and which reminded them of the old houses they had abandoned. In their native mountains the Aryas scarcely used any material in building but dry stones and small unsquared trunks of trees; the races among whom they settled built with pise and with canes. This pise was only a coarse concrete of mud and small pebbles rammed between wicker-work, and which, dried in the sun, acquired a certain degree of solidity. The basement thus formed, the natives erected upon it light timber framing, whose open spaces were filled in with canes which they plastered with the same mud mixed with straw; so that these habitations presented the appearance shown in figure 17. The timbers remaining visible were painted, as well as the ends of the roofing, which greatly overhung the walls in order to shelter them well. This, however, did not appear to the Aryas a sufficiently substantial structure, or the dwellings thus built worthy to house them.

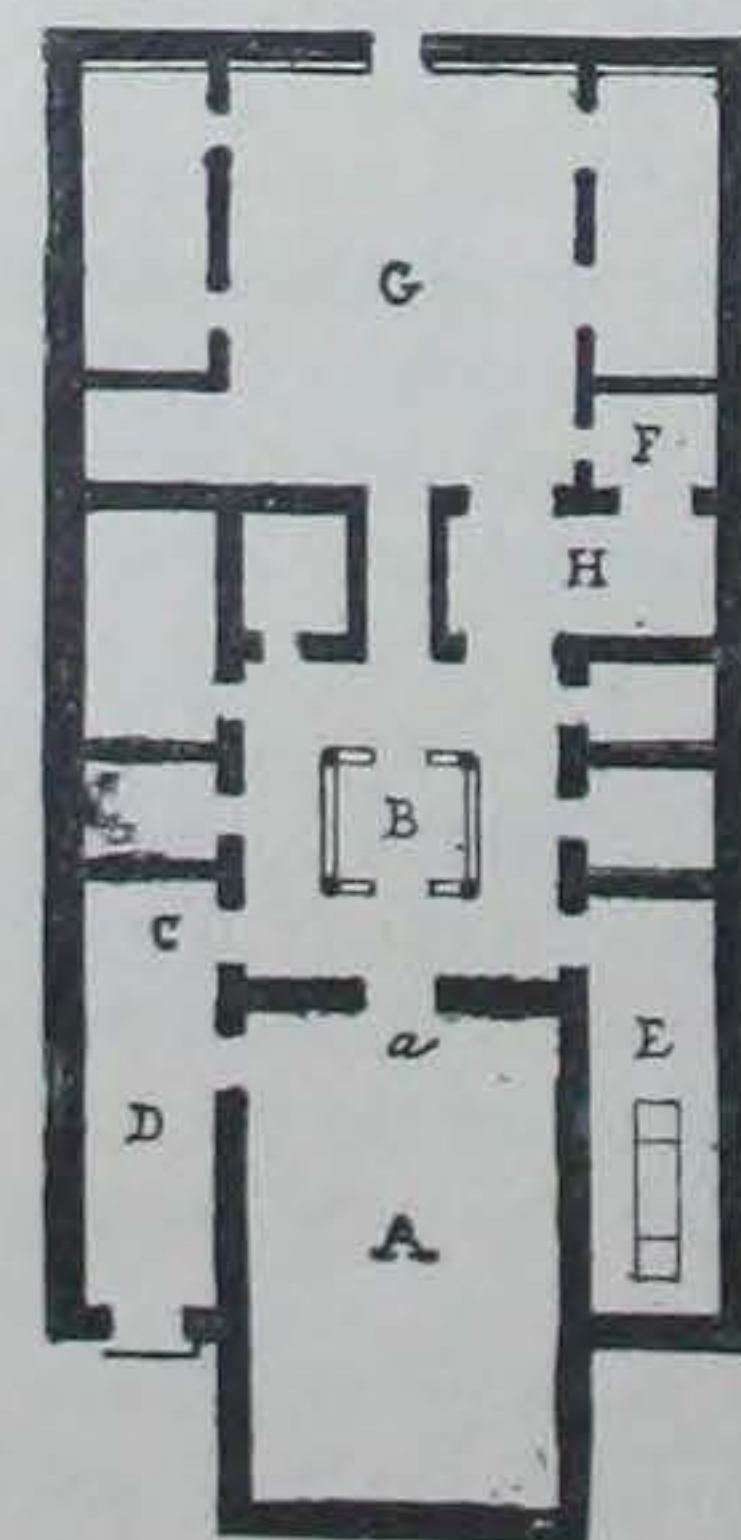
They insisted on having walls built of stone or of substantial timber-work, solid, like that of their mountain homes, and better than walls made of reeds covered with thin plastering; accustomed as they were to dwell within walls of piled-up trunks of trees firmly joined at the corners. The wretched natives had great difficulty in satisfying the requirements of their new masters, inasmuch as the latter were perfectly able to tell what they did *not* want, while they but vaguely explained what they actually desired. Accordingly, in spite of blows, the new buildings were raised with difficulty, and were often abandoned by the workmen, who themselves also emigrated, being unable to satisfy the whims of the new-comers. The country thus became gradually depopulated; and the Aryas, in order to keep men to work for them, found themselves obliged to confine the inhabitants that re-



HOUSE OF THE PRIMITIVE INHABITANT OF THE UPPER INDUS.—FIG. 17.

mained, and to take from them the few horses they possessed. The poor people were divided into classes; some had to till the ground, others to tend the cattle, and the most intelligent, or those who already followed some industrial calling, were compelled to work at buildings, the weaving of stuffs, and the manufacture of implements and utensils. To each family of the Aryas was apportioned a certain number of these natives, with the obligation to look after them and make them work. If any of them attempted to escape, the Aryas immediately mounted their horses in pursuit; he was soon brought back and imprisoned, receiving for a week or two more blows than food. After a year of this treatment the cases of flight had become very rare, and the natives appeared resigned to their fate. All the results of their labor, whether in cultivating the ground or in other industrial pursuits, belonged by right to the Arya families, who from that time took upon themselves to provide food and raiment for their serfs.

As a result of this social condition the dwellings of the conquerors might soon be seen rising amidst the huts inhabited by the natives attached to their service. Their huts were of the most humble appearance, but were built according to the methods adopted by the natives; while the houses of their masters had a more durable aspect, although their structure resembled in some of its forms that of the aboriginal dwellings, especially in the arrangement of the roofing. Moreover, the Aryas vied with each other as to which should have the most spacious and beautiful house. After some years' sojourn in this land, that equality of condition, which had in great measure existed among the families of the conquerors, was no longer to be found. Those whose chiefs were active, vigorous, and intelligent, knowing well how to govern the domain of which they had become the possessors, and to manage their serfs so as to render their condition supportable, beheld their wealth increase to the detriment of the families whose chiefs did not take such pains or display such energy. The latter, unable to support their slaves, were obliged to part with some of them, and with the portions of land on which they lived; for the soil and the serf who lived on it went together.



PLAN OF HOUSE OF THE ARYAS SETTLED ON THE UPPER INDUS. FIG. 18.

After twenty years' sojourn of the new-comers in this fertile territory, there might, therefore, be reckoned about a dozen great families distinguished by their power and riches from the remainder who were less fortunate, though in the assemblies they had equal rights in deciding on matters

under discussion. But whether spacious or small, the Aryan dwellings were all built on the same plan.

They invariably consisted of a large hall in which the family and their neighbors assembled, and an interior court, more or less spacious, sometimes surrounded by porticos, beneath which opened the bedrooms. These habitations were closed on the outside; for the Aryas, surrounded by serfs whom they could not trust, did not wish to be overlooked by the curious, or their dwellings rendered too easily accessible. An outer enclosure contained the cattle-sheds, the stables, and the quarters for the servants attached to the house, with barns and provision stores.

Figure 18 presents the plan of one of the largest and best arranged of these houses. At A, the hall entered by two doors—one from the outside, the other from the inner court. From this large hall there is no communication with the habitation except by the second door a. At B is the interior court with its portico, and the bed-chambers all round. The entrance to the dwelling part is at c, with the apartment d, in which the chief daily receives the people from without.



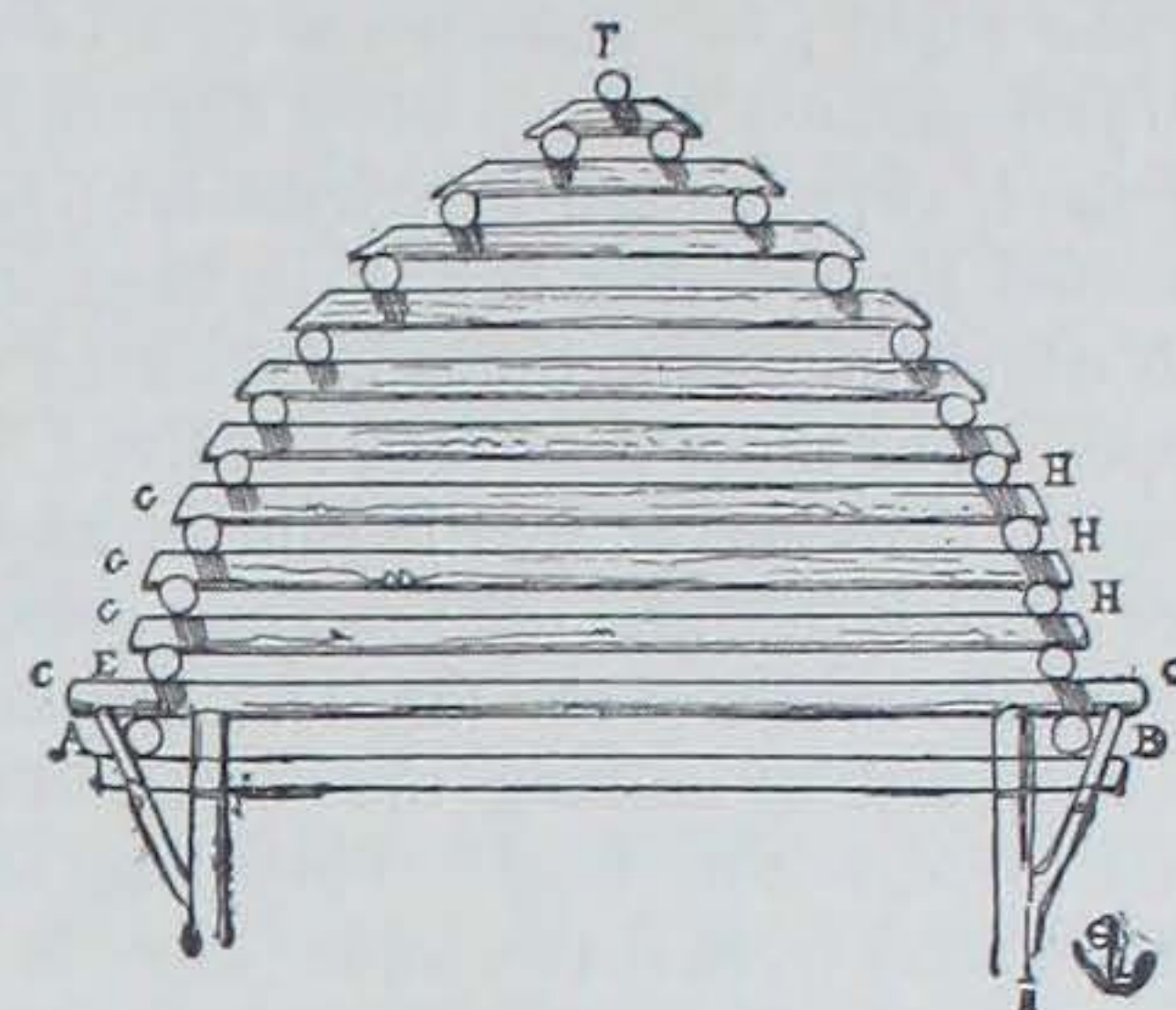
VIEW OF HOUSE OF THE ARYAS SETTLED ON THE UPPER INDUS.—FIG. 19.

At E is the consecrated part, reserved for sacrificial rites, and where the family treasure is deposited; for at that time the head of the family used to perform amid his household the three religious ceremonies of the day: the first at sunrise, the second when the sun was at its highest, and the third at the setting of the star that generates life. At G is the outer court with its wall, its special gate, and the stables, servants' quarters and storerooms, a small room at F for the preparation of food, and at H the room in which the family meet to take their meals.

Fine trees surround this dwelling, which is built of stone and timber, and of which figure 19 presents the external aspect on the side of the great hall. But we must enter somewhat into detail respecting the mixed system of construction employed.

The master of this habitation had determined that all the lower part toward the outside should be built of stone. For this purpose he had employed a part of his serfs in quarrying blocks of stone along the neighboring limestone hills; these blocks were brought to the site on wagons drawn by oxen. On this basement was erected, to form the upper part of the great hall, a framing of heavy timber-work; and on this box a roof constructed according to the method shown in figure 20.

Upon the upper wall-plates AB were laid cross-timbers CC; on these the side-pieces E, then other shorter cross-timbers G, side-pieces H, and so on up to the ridge F. Thus were obtained gables of open-work at either end and one midway, thoroughly strong. To the side-pieces were fastened long poles, and on these reeds lengthwise,—



GABLE FRAMING OF UNHEWN TIMBERS.—FIG. 20.

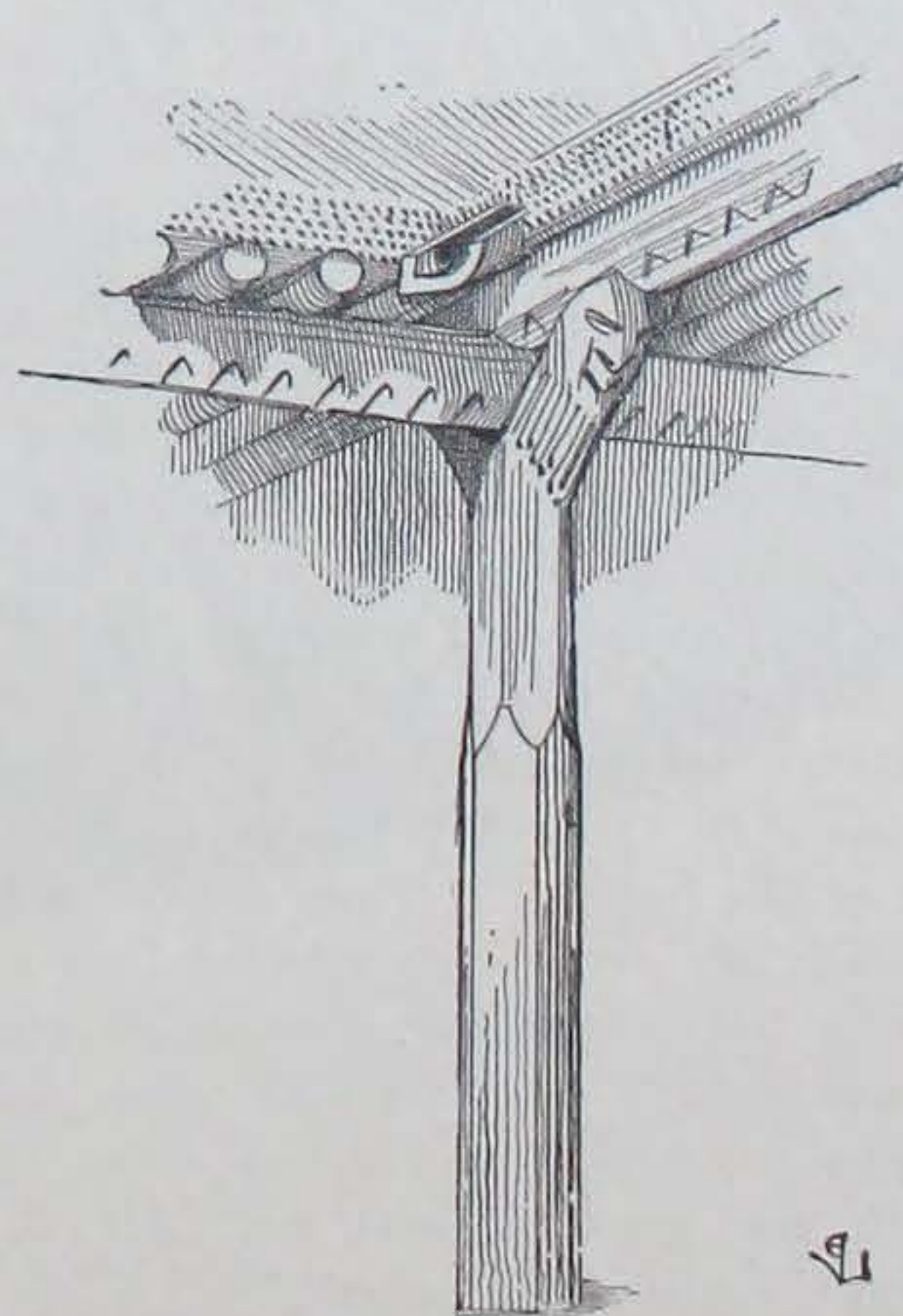
then a thick layer of rushes thatched according to the method adopted by the natives, so that the rain could not penetrate this roofing.

The same procedure was adopted for the buildings designed for habitation,—that is to say, with a series of open-work gables or *lean-to's*. The supports of the portico were made of trunks of trees forked at the top, as shown in figure 21; and as the master of the house was rich, and had serfs and skilled in the art of working wood, instead of leaving these trunks in the rough, he had them wrought as richly as possible, so that this portico presented a very striking appearance, and was considered by all an excellent work.

The doorways left in the stone basement were made of two planks meeting at the top so as to form triangular openings, perfectly strong, and whose inclined jambs were enclosed by the walls made of irregular blocks carefully fitted, according to the method used by the Aryas in their mountain home. The partitions separating the rooms consisted merely of coarse trellis-work of canes on which were hung skins of beasts. The repasts were prepared in the smaller hall F (fig. 18), as stated above, and the family took their meals in the apartment H, opening on the portico.

The bed-chambers were lighted only by the doorways opening on the portico, and the great hall by the openings left in the upper timber framing, these openings being closed only by wicker-work.

Vâmadvâ, the master of this beautiful residence, which was surrounded by some thirty huts inhabited by his serfs, was a tall old man. His white beard, his clear blue eyes, his wide forehead, which, in spite of his years, was still unwrinkled, his tall and erect stature and noble bearing, imposed respect on equals as well as dependents. Although he had enriched himself at the expense of his neighbors, he never failed to help them in distress; he therefore enjoyed a considerable influence in the deliberative assemblies, and was consulted on all matters under discussion. His great hall could readily accommodate two hundred persons, and it was one of the places where the Aryas liked to assemble; for the speech of the master was persuasive, and he had the art of bringing over others to his own opinion. On certain occasions, therefore, banquets were held in this hall, which were pro-



FORKED POST.—FIG. 21

ionged far into the night; for abundance had corrupted the sober habits of the Aryan mountaineers. They abstained, however, from certain kinds of food, swine's flesh in particular; and did not drink any of the fermented liquors that had long been in use among the natives, and with which they sometimes intoxicated themselves. The women never appeared at these banquets, but lived in the inner apartments of the houses, working at textile fabrics and making clothes for the family, or superintending the servants, bringing up the children, and preparing the meals of the family. To the young girls was specially assigned the task of milking the cows and pouring the milk into vessels, either for drink or food. They had also to gather the plant *sôma*, and to extract from it the liquor used in ceremonial rites.

On one of those festal occasions the whole Aryan colony had been abroad since the morning, and were on their way to Vâmadevâ's dwelling. It was a beautiful day in spring, clear and serene. The men were to be seen dressed in clothing of brilliant white, their heads covered with fur caps, their limbs swathed round with strips of woollen stuff, and sandals on their feet,—advancing slowly in small bodies, conversing among themselves, while the women and children were following them, laughing and singing. The women were dressed in fine fabrics of white wool covered with embroidery of various colors. Their arms and faces, being uncovered, showed the whiteness of their skin.

Buskins made of lambs' fleeces protected their feet and legs; and through their long transparent veils their fawn-colored locks, adorned with beads of gold, were sufficiently visible. As for the children, they were running from one group to the other almost naked.

Vâmadevâ was to celebrate at noon the marriage of his granddaughter to a young man of the neighborhood. In front of his dwelling a vast enclosure had been formed with clods of turf and branches. In the midst of the circular enclosure rose a slightly elevated mound on which was placed a flat stone.

While awaiting the ceremony, the Aryas stood in groups around the enclosure without entering it; and the family of Vâmadevâ distributed cakes, curdled milk, parched corn, and water.

The sun was reaching the zenith when Vâmadevâ came out of his house and appeared in the centre of the enclosure, followed by his wife and daughters bearing the sacrificial vessels containing the liquor of the *sôma*, butter, and dry herbs. When the sacred fire of Agni was kindled on the mound, the old man turned toward the flame pronouncing an invocation to the celestial powers. The bride then advanced, followed at some distance by her guards of honor and the two families farther in the rear. At this spectacle the murmurs of the crowd suddenly ceased, and amid the most profound silence, the young girl pronounced these words in a voice clear as the song of the lark: "Father! I ask to be united to Nêma, son of Gotôma!"

"Sûryâ," replied the old man, "advances, dressed in a splendid robe, to be united to Sôma. The hand has formed her attire, the eye has superintended the dressing of her hair, heaven and earth have furnished her adornment now that Sûryâ comes to meet her spouse. The Aṣwins are her two guards of honor, Agni is her messenger. Sôma has desired Sûryâ for his wife; the two Aṣwins were her guards of honor when Savitri gave him as a husband to his daughter, who is made happy by this choice.

"O Aṣwins, when you came in your three-wheeled car to ask for Sôma the hand of Sûryâ, all the gods applauded, and Pûsân, son of heaven and of earth, adorned the two nearest relatives."

The bridegroom advanced in his turn and took his place at the young girl's side; addressing the latter, Vâmadevâ said to her: "I take her away from paternal authority to place her under that of a husband. May she be fortunate, O beneficent Indra, and have many children!" An acclamation from the crowd followed these words, and the husband then taking the hand of the young woman, the grandfather continued: "May thy family increase in our house. Awake for the fire of the hearth!" Then the bride let fall her ornaments which covered her dress, and appeared to the assembly still more beautiful under the long white robe that enveloped her.

Nêma, taking the hand of his wife once more, said to her with a loud voice: "I take thy hand for our happiness; I wish that thou shouldst be my wife, and grow old with me. All the gods have given thee to me, who am the fire of the hearth."

Then Vâmadevâ, turning toward the assembly, exclaimed: "May

this spouse be happy! Approach her; look at her. Express to her your good wishes, and return to your dwellings."

Epergos and Doxius were mingled in the crowd. While attentively observing the details of the ceremony, Epergos remarked to his companion: "Our mountaineers have remarkably advanced in refinement, dost thou not think so?"

"Too much!" replied Doxius: "look at these capacious dwellings, these splendid dresses; listen to these invocations: one step more and these men will have become corrupted by luxury and vanity, if they are not so already. Who is this man that addresses the celestial powers and seems to speak in their name?"

"It is the grandfather of the bride; is there any one more interested than he in securing for his granddaughter the good-will of these powers?"

"Who assures thee that he is worthy to address them?"

"Who tells thee that he is not so?"

"These Aryas have already reduced to slavery men who were feebler than themselves, and whom they ought to have protected! . . ."

And thus, engaged in controversy as usual, Epergos and Doxius found themselves, at the termination of the ceremony, close behind the steps of Vâmadevâ. He, perceiving that they were strangers, invited them to enter his dwelling to rest and recruit themselves.

CHAPTER VII

HOW DOXIUS AND EPERGOS RESPECTIVELY EMPLOYED THEMSELVES AMONG THE ARYAS SETTLED ON THE UPPER INDUS

DURING their abode among this colony of Aryas, Epergos and Doxius employed their time differently. The former was always visiting the workmen, with a view to ascertain their methods of procedure. Doxius used to spend his days among the old men, and would converse with them respecting their beliefs and religious rites.

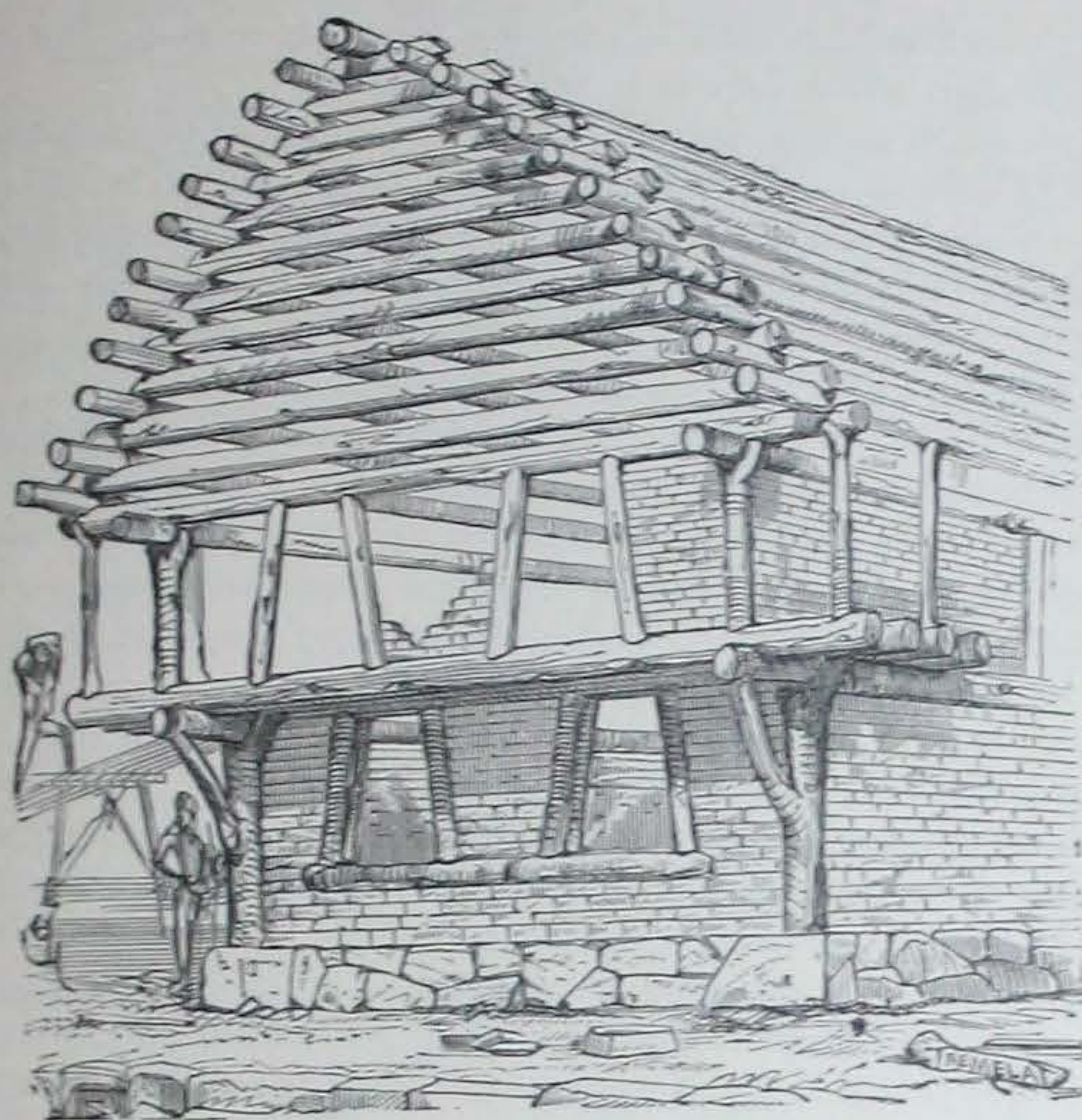
Epergos was not sparing of advice to the natives he saw at work; and the latter, naturally docile, listened to him with respect. He indicated to them the means of improving their tools, both in forging them and increasing their cutting action by hammering the metal and sharpening their edges on certain stones which were to be found in the neighborhood, and which were in fact sandstones. Thus they began to cut timber more readily, and to join pieces of wood more skilfully.

One of the chief Aryas, who, until then, had been contented with a somewhat rude dwelling, having acquired wealth by breeding large herds of cattle, wished to have a sumptuous residence built for him, and sent for the most capable workmen among his serfs and among those of his neighbors, to whom he was to pay so much per head for their services.

Remembering what he had seen in the fat Fau's house, and the ingenious methods of construction adopted by builders among the yellow race in their bamboo dwellings, Epergos thought that they might take advantage of these methods in the timber-work of the new building; for those which he observed appeared to him coarse and heavy, and falling short of the advantages which the use of timber affords.

Epergos called to mind the balconies projecting outward, and thought that if such results could be obtained with bamboos, they might be still more easily secured with the help of resinous substances of a more durable and solid nature. He reflected also that, in any case, if in future buildings they should have to be less lavish of wood,—since they would have to go far to cut it,—they would lose less time, and the inhabitant would be sooner able to occupy his house.

The plan of the new habitation did not differ from that given in figure 18; but an advantage was gained by making the upper part of the building project over the lower parts, so as to give more shelter to the latter, and by introducing those projecting galleries which present so many conveniences within and without, as was seen in the fat Fau's house. Following the advice of Epergos therefore, the builder arranged the front or gable of the principal hall as indicated in figure



BUILDING OF OVERHANGING UNWROUGHT TIMBER FRAMING.—FIG. 22.

22. They found in the forest two trunks of trees each presenting a fork and a strong branch in front. These trunks formed the main supports of the exterior front of the great hall; so that the horizontal beams which fitted into the forks were relieved at their extremities by the third anterior branch. Thus on the projection of these beams, firmly supported, a transverse piece of wood could be placed, on which two other posts likewise forked at the head could be raised, which would receive the two horizontal pieces terminating the building laterally. It only remained to place on these timbers those forming the roof and gables, according to the preceding method. This arrangement allowed a projecting tier or story to be raised above the ground-floor.

But the Aryas, perhaps, as a souvenir of their mountain homes, or in order to keep a stricter watch over the dwellings of their serfs, were anxious that their houses should rise above the natural level of the plain. They, therefore, raised a platform of rammed earth, and the building was erected on this platform.

The lower parts of the building being henceforth perfectly sheltered by the projection of the upper framing, it was decided with regard to these that they should dispense with those stone walls, which required much labor and time, and content themselves with walls made of clay bricks, dried in the sun, for the parts above the plinth, which was constructed of blocks of stone.

"Why," said Doxius to his companion, while the building was in progress, "should you thus disturb the natural order of things, and support a great and wide body upon a narrow base? The inhabitants had at least the good sense to raise buildings firmly seated on their foundations, while you are prompting them to reverse the order of things. Are mountains wider at their summits than at their base?"

"Mountains," replied Epergos, "are mountains, not houses. . . . Are not trees wider above their branches than at the bottom of their trunks? And since these people are building with wood, is it not quite natural that they should adopt the principle it suggests—that is, widen their construction like the tree, whose branches diverge from the trunk as they rise? Did we not see in the country of the yellow race houses built solely of bamboos, and which had those exterior overhangings so favorable to the comfort of the inmates—so well adapted to effectually preserve the lower part of the building?"

"Yes, certainly," replied Doxius, "and, among others, the house of the fat Fau who so courteously showed us the door. Such ideas could not have originated except in the heads of such fools; and if this is what you are undertaking to teach the men of this country who have more sense, you are spending your time to very questionable purpose. If they have the modicum of wisdom which they seem to possess, they will disapprove of your plans." The building, however, continued to advance.

Doxius had undertaken a very different task. In the conversations

he had held with some of the old men among the Aryas, he had expressed himself profoundly struck with the grandeur of their religious system, and had intimated to them his fear lest the purity of their worship should be corrupted. "It is indeed a noble sight to behold the chief of the family, surrounded by those dependent on him, place himself every day in relation with the powers that govern the universe; but do you not fear that with time those traditions will be corrupted,—that there will be negligence and forgetfulness in following them, and that many will attempt innovations? . . . and then, what will become of dogmatic truth? what will become of religious rites? To preserve them in their purity, the doctrine and the ritual should be taught and practised by those among you who are most respected; who would transmit the tradition from one generation to another with rigorous exactitude, subjecting themselves to special tests of knowledge, and so not allowing the profane to know, interpret, or hand down sacred things."

After such discourses the old men would remain for a time plunged in thought, and would deliberate respecting them. On another occasion Doxius said to them:

"Each father of a family sacrifices in his own dwelling; do you know how he comports himself on such occasions? Do you know whether he does not deviate from the truth? Would it not be better to practise the ceremonial in places set apart for the purpose, and in the presence of persons invested with a sacred character by a special council—a college of conservators of doctrine?"

These reasons, and others which we omit, seemed to produce an impression on the venerable persons to whom Doxius presented them.

When the house was finished, its wealthy owner was desirous of assembling in it, according to custom, the most distinguished of the Aryas. This building, which, both in its exterior and interior, presented certain innovations, did not approve itself to the taste of the oldest; while the younger part of the assembly got Epergos to explain to them the improvements recommended by him, and carried out according to his instructions. Opinion was therefore divided; and, as was the custom in such cases among the men of this race, the discussion assumed the character of a regular deliberation. When they had examined everything, the master of the house, who had soon become aware of the diversity of opinion, having sent round refreshments, consisting of cakes of meal and honey and curdled milk placed in the middle of the hall, spoke thus to his guests:

"You have visited this abode: it exhibits a structure which has been hitherto not customary among the Aryas. I thought I did well to seek for novel arrangements, adapted to render the life of man more comfortable, and which afforded a more secure and durable shelter; but I am anxious to know your opinion respecting the success of my attempts."

Vâmadevâ, after a moment's silence (no one being in a hurry to respond), rose slowly from the mat on which he had been seated, and majestically gathering together the folds of his long garment of undyed wool, replied:

"Thou hast acted as a free man, and no one among the chiefs of our families assembled here has the right to blame thee if thou hast built a house for thyself and thy family exhibiting novel arrangements; but since thou hast made an appeal to our views, I will give thee mine:—"

"Formerly, when we inhabited our mountains, we lived in abodes less vast, less convenient, less sumptuous. Were we on that account less vigorous, less capable of subduing the Dasyus, less enduring of fatigue, less prepared to defend our families and our property? Certainly not. I like the new dwelling I have had built; but I liked, perhaps still better, the hut which I one day quitted with my wagons, to come and settle with you in this plain. These dwellings we are building, in ever-increasing size and beauty, are to me a source of fear as regards our children. I fear lest in the bosom of this luxurious existence they should forget the rude and simple life which the Arya ought to lead. If then I do not allow myself to blame what thou hast done in the fair exercise of thy liberty, I cannot refrain from casting a look of anxiety on the future, and asking myself whether this plenitude of comfort will not tend to corrupt those to whom we shall leave such beautiful habitations—we who in our youth lived under the scanty shelter of bark roofs; but who, habituated to fatigue and to struggle with the inclemency of the weather, found ourselves strong

and resolute enough to render ourselves masters of this vast country, and of the miserable race that occupied it." A murmur of approval from one quarter of the assembly greeted this discourse. Vâmadvê continued :

"But there is a still greater peril ; the protection which the powers that direct nature accord to the Arya is at stake. In the bosom of this abundant wealth—this life which is becoming more and more effeminate, since we have no longer to sustain an incessant struggle—what we must especially fear is lest we should forget the homage we are accustomed to render to those divine powers. I readily believe that no one among us neglects the sacrifices which secure their favor ; but who can assure us that our children, brought up in luxury, will be always thus scrupulous,—that they will rise before daybreak to offer the sacrifice to Agni, and that our daughters will always go to gather the *somâ* when the moon shines in the starry heaven?" A sort of shudder then ran through the assembly, and a murmur of voices was heard for a long time before Vâmadvê could resume his discourse.

"We must therefore take counsel," said he at length when silence was restored ; "we cannot endure the thought that the most precious inheritance left us by our ancestors should be wasted, that the sanctity of our worship transmitted by the gods themselves to the fathers of our race should be corrupted."

"No, no," was heard from every part of the assembly.

"Well, then, let us appoint guardians of this sacred ritual ; and let us choose for this purpose the worthiest and most respected among us. Having done this we have nothing more to fear ; for these guardians, invested by us with sacred functions, and beloved by the gods of whose worship they will be the conservators, will become our counsellors when a proposition is made to innovate or modify anything in our customs, habits, and daily life. Thus, always guided by their intelligence, and blessed by the favor of the divine powers, the race of the Aryas will maintain itself in its original purity, and will continue to be the most powerful on the face of the earth." The termination of this discourse was received with acclamations, and before the meeting separated, six chiefs of families were unanimously invested with sacerdotal functions.

On leaving the assembly, Doxius, who was habitually gloomy, was radiant.

"You seem to be very happy," said Epergos to his companion when they were alone.

"Tolerably so," replied Doxius, "and I begin to think we shall make something of these men. It is thy extravagant house that has occasioned me this satisfaction, and I will take good care not to blame thee for having had it built according to thy fancy."

"Be it so ; but thou wilt not hinder the world from advancing, nor me from going on with what thou callest my follies. These good people are going to sleep well satisfied ; but they are preparing for themselves a work of no small difficulty, and that for many a long year."

"Because . . . ?"

"Oh ! I know very well what I mean, and that is enough for me ; the evil or the good—whichever thou mayst choose to call it—is already done ; retrogression is impossible. If those elders, commissioned to preserve the pure doctrines, transmit them intact to their successors, all will be well ; but if they themselves fall into error—what then ?"

CHAPTER VIII

THE DESERT OF CENTRAL ASIA

THE plain extends as far as the eye can reach. In some quarters lines of calcareous rocks traverse the sandy soil like furrows. A few lichens form yellow spots on the gray stone. Sometimes also a shallow lake presents itself, on whose banks grow reeds which are soon dried up by the sun and wind. Occasionally peaty marshes are observed, in which the steps of wanderers form so many holes which become filled with brackish water. Not a tree, not a bush. The sky, of a grayish blue, mingles with the hazy horizon. The air is calm and

heavy ; though at intervals a whirling gust supervenes, and raises columns of dust which appear to advance slowly.

The silence is interrupted only by the croakings of batrachians and the hum of insects near the lakes. Long faults, like so many cracks in the terrestrial crust, form the only interruption to the monotony of these plains. At the foot of those escarpments, which are scarcely visible at a distance, where there is shelter from the winds, are grasses, reddish mosses, and a few slender thorny shrubs.

Epergos and Doxius, both mounted on small black horses with rough coats and short broad heads, are travelling at a walking pace along one of those faults which seems to stretch as far as the horizon, oppressed by the heat and surrounded by a crowd of flies.

"What dost thou hope to find in this desert ; what art thou come to look for here ?" said Doxius after a long silence.

"Men," replied Epergos.

"Men here ! and how could they live here ?"

"Wherever frogs and flies live, man can live. As for flies, there is no want of them, as thou seest ; and as for frogs, have we not heard abundance of them since the day began ?" And after another interval of silence, as the sun was beginning to sink : "Look," said Epergos, "there, before us,—that thin column of bluish smoke rising straight toward the sky, is a fire, and certainly neither the flies nor the frogs have lighted it."

"Thou art dreaming ; it is the wind raising a column of dust as it has done throughout the day."

"No ; at this hour the wind no longer produces this phenomenon in these plains ; it is either quite at rest or follows one direction. That is smoke produced by green wood or dry grass ; let us go forward !"

Their horses began to trot through the points of rocks that jutted out of the sand, and the companions soon found themselves in the middle of a flock of sheep. At some distance they observed men, horses, and what seemed a line of brown hillocks scarcely raised above the ground, which at this spot was covered with grass.

As soon as they were within hearing, one of the men cried out to them not to advance farther ; and dogs began to bark furiously. The man sprang upon a horse that was feeding near him, and arming himself with a long lance he advanced at a walking pace toward Epergos and Doxius. He was of medium height, dressed in a short, coarse tunic with a kind of pelisse of black sheepskins, from which hung a hood. His legs and arms were bare, and his feet covered with sandals of skin fastened by thongs ; his face, whose native hue was yellow and which was also tanned by the sun, was anything but handsome. Under his black and closely approaching eyebrows, below a projecting and wide forehead, glittered two little looplike eyes with black pupils, and which never looked straight before them. The thick, short nose, the strongly projecting cheek-bones, the wide mouth surrounded by a scanty beard of a dull black color, and a copper-colored oily skin, imparted to these features a repulsive aspect.

"What do you want ?" said the man ; "to what tribe do you belong ?"

"To none," replied Epergos ; "we are strangers to these deserts and have lost our way ; we ask of thee hospitality for this night."

"Approach then, and get down from your horses."

Epergos and Doxius were not slow in obeying this order given in a harsh tone.

"What are you carrying on your horses ?" continued the man.

"Provisions, nothing more."

"Nothing from the east ?"

"Nothing from the east."

"You come from thence nevertheless ?"

"Yes."

"I can see that by your faces."

"Thou art acquainted then with the men of those regions."

"Many of them have passed along this way."

"Did they do you good or harm ?"

"Harm ; they robbed our flocks."

"Thou dost not like them, therefore."

"No."

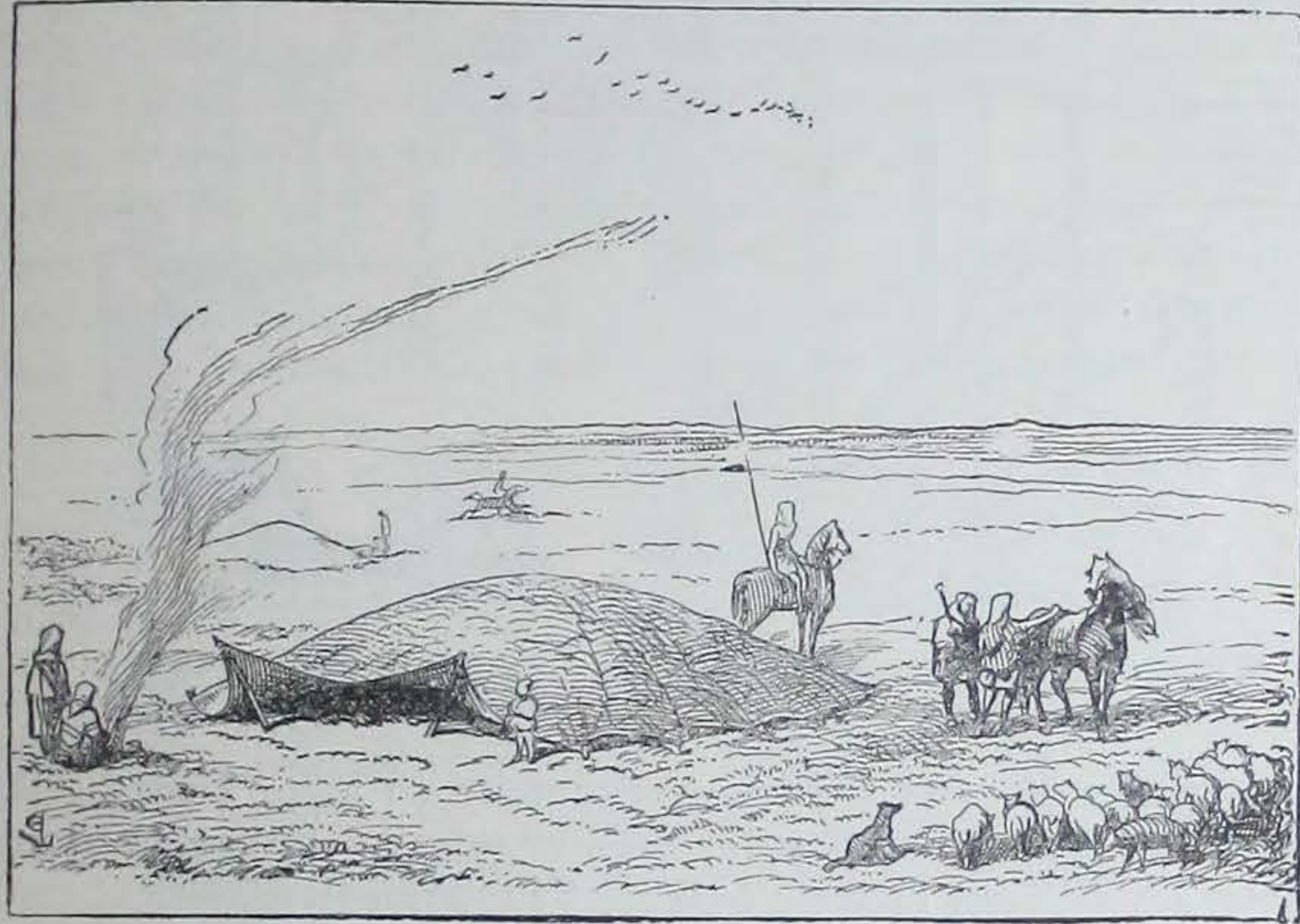
"Dost thou wish to take vengeance upon us ?"

"No ; there are only two of you : we are more numerous than you ; you have no weapons and we have ; we do not fear you. If you had

anything with you that we should like, we should take it. But what good would it be to take your lives? That would not restore to us the flocks stolen by your countrymen."

"That is plain speaking, and perhaps we shall be able to do you some good. Where do you live?"

"There," said the man pointing to the elevations which at a distance they had taken for mounds. They drew near, and perceived that these habitations were made of skins sewn together, raised above the ground by an ingenious combination of stakes, and fixed by pegs all round (fig. 23).



TENT OF THE MONGOLIAN TARTAR.—FIG. 23.

"You live in there," said Epergos.

"The women and children stay there; we only go in to sleep."

Epergos entered one of the tents by creeping; but the fetid odor of the interior soon drove him out again.

Meanwhile the companions took some provisions from a bag suspended at their saddles, and sitting down on the grass, proceeded to take their evening's repast. Their host gave them some ewe's milk, and all the inhabitants of the encampment came to see the strangers, without manifesting any other sentiment than indifference. Some of the women seemed to have more curiosity, and walked round Epergos and Doxius, talking to each other, looking at their clothes, and venturing to touch them.

After sunset, the man who had accompanied them to the middle of the encampment, pointing out to them a small tent, said to them: "Here is a shelter for the night, this tent is empty; he who used to live in it will not return to it." Then turning round he went to seek his own lodging. Epergos and Doxius entered the place of shelter that had been indicated, but they remained only for a few moments, on account of its intolerable odor. They thought of passing the night in the open air, wrapped in large cloaks which they carried on their horses. Toward midnight, however, the cold became so piercing that they were obliged to take shelter under the tent that had been assigned them. Sleep overpowered them after the fatigues of the day; and when they awoke the sun was already high. On coming out of their sleeping-place, tents, men, horses and herds had all disappeared, and as far as the eye could reach there was nothing to be seen but the hazy and level horizon, with not a sign of life. The nomads had taken with them the horses of the two companions, deeming them tolerably worth having, and before dawn had decamped in silence.



CHAPTER IX

THE DELTA OF THE NILE

GREAT salt lakes communicating with the sea stretch along a vast shore of two hundred miles in breadth, and follow the arc of a circle presenting its convexity toward the north. Into these lakes, and along the shore itself, debouch several arms of a large river with muddy waters. Advancing into the regions south of these salt lakes, we find fresh-water marshes and a blackish soil teeming with wading birds, flocks of wild geese and ducks, and covered with reeds and a rich vegetation. Crocodiles swarm in the fresh-water lakes and the arms of the slowly flowing river, hippopotamuses bathe, and otters and batrachians swim.

This district is bordered east and west by two chains of hills of slight elevation, which tend to approach each other as we get farther from the sea, and cause the valley through which the river flows to become narrower. These hills are bare and destitute of vegetation; and beyond them we find nothing but sand and pebbles. It very seldom rains on the sea-coast, and farther inland not a drop is ever seen.

The atmosphere is always pure, dry, and light, and is favorable to health. At the summer solstice the waters of the river begin to swell, and their level rises gradually until the autumnal equinox, when the whole Delta is overflowed. Then the waters slowly decrease and the river returns to its bed. The mud which it thus annually brings down causes a gradual elevation of the soil, encroaches on the sea, and fills up the smaller pools. Vegetation immediately takes possession of these deposits, and clouds of insects rise in the air as the waters subside. This country is occupied by men of mild manners, delicate features, and fine and slender limbs. Their skin is white with a slight bistre tint. Their eyes and hair are ebony black. These men say that their fathers came from the north-east into this country, which was then only a lagune, after having passed through certain deserts. They live in villages, the houses of which are built of mud and reeds, and obey a body of elders, who in hereditary succession regulate all daily usages, and preside over all the acts of life and religious ceremonies.

These elders, entrusted with the administration and regulation of all things, do not cultivate the ground, gather in the fruits of the earth, or carry on any trade; entirely devoted to their religious and civil duties, they are supported by the population, over which they exercise absolute power.

The latter, though reduced to a condition bordering on serfdom,—their wants being easily satisfied in this beautiful climate, since they find in the natural produce of the soil enough for food and clothing,—do not complain of this condition, and make no effort to alter it.

They bid strangers welcome, without, however, permitting them to mingle in the transactions of daily life. They would deem themselves defiled by contact with them; they neither eat nor drink with them, nor allow them to enter the places which they consider sacred, or to speak to their women.

The inhabitants of the lowlands have only one wife; those of the higher valleys are allowed to have several. On the river and the lakes they have boats made of planks, and of a woody plant that grows in the marshes, and which they call byblos. They make use of them for fishing and for commerce, for they are by disposition a trading people. Their arms consist of bows made of the skin of the hippopotamus, slings, and a kind of pikes. They employ copper and gold, and have the art of making pottery and glassware, which they skilfully color in various patterns. In the higher part of the river live a black race, against whom they are obliged sometimes to defend their southern frontier, which is about six hundred miles from the sea. On the west and east they have no cause for apprehension, since these regions are desert. They have a great respect for the dead, whose bodies they preserve with salt to prevent them from decaying. This respect is extended to some of the lower animals, which they consider sacred, and to which they render funeral honors.

Their houses, separated from each other and surrounded each by a breadth of cultivated ground, are built on the shores of the river or the lakes, as far as possible out of the reach of the inundations; for

as they are built partly of clay, when they have been immersed in water for some days, they are reduced to mere mud, and fall in.

The wealthiest inhabitants, therefore, take care to erect their dwellings on platforms, or to mingle reeds with the clay in such a manner as to enable the latter to resist the action of the water.

The inhabitants of that part of the river above the Delta, who live in a narrow valley bounded by chains of hills of limestone or sandstone, and destitute of fertile marshes filled with those useful reeds which serve also for food—dwell in grottos, formed by nature, or hollowed out in the sides of the hills.

These men subsist by fishing and the chase, and on spelt, which is cultivated along the banks of the river.

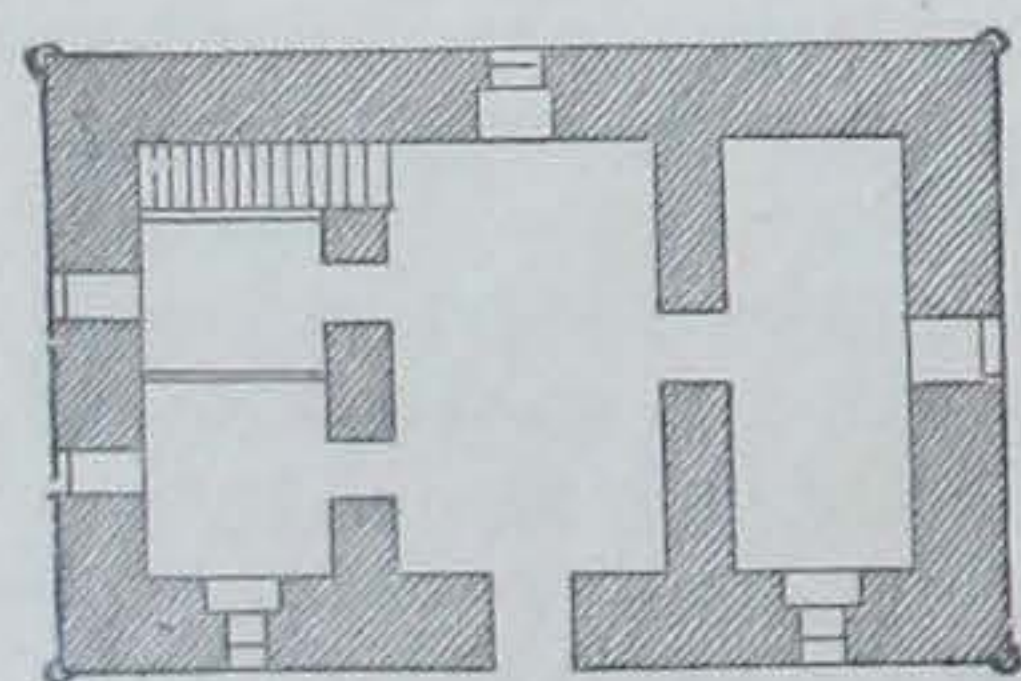
Bolder and more robust than the inhabitants of the lowlands, it is they who struggle against the black race when the latter attempt to descend the course of the river. They seem, however, to be of the same origin as their neighbors of the Delta, though they are taller and darker in complexion, more enterprising, active, and independent.

We will describe how the inhabitants of the Delta build their houses, which are by no means capacious; for they live habitually in the open air, and scarcely remain in their dwellings except to sleep.

Many even take their meals out of doors under shelters made of mats, which screen them from the heat of the sun, and which are set up either at the side of the houses or at the top of them; for as the rain is very rare in this country the houses have no roofs, but are covered by terraces. The inhabitants of this region are very fond of animals; they have always some with them; and they take their meals surrounded by domesticated dogs, cats, and birds. They exclude from their presence only those animals which they consider unclean,—pigs, for example; though they make use of them and eat their flesh. But if a man touches a pig, he has to purify himself by plunging into water with his clothes on. Those who tend these animals live apart, are not admitted into the company of other men, and may not enter the sacred enclosures.

When, therefore, an inhabitant of the Delta has selected the site he judges suitable for erecting his dwelling, he has the ground plan marked out by those who are entrusted with building operations, and who form a corporate body. Then they lay in a store of bundles of canes and reeds called byblos and lotus, and form a heap of clay, which they temper with water and mix with spelt straw; and of this they form bricks that are quickly dried in the sun.

Houses of the common sort consist of a principal apartment, about eight cubits wide (fig. 24)* by fourteen long; a second narrower room six cubits wide, the length being the same; and two small apartments



PLAN OF PRIMITIVE EGYPTIAN HOUSE.—FIG. 24.

serving for bed-chambers, six cubits wide and as many long, separated by a partition less in height than the apartment. A wooden stair on the inside gives access to the terrace. The walls are thick, and this is how they are built:—

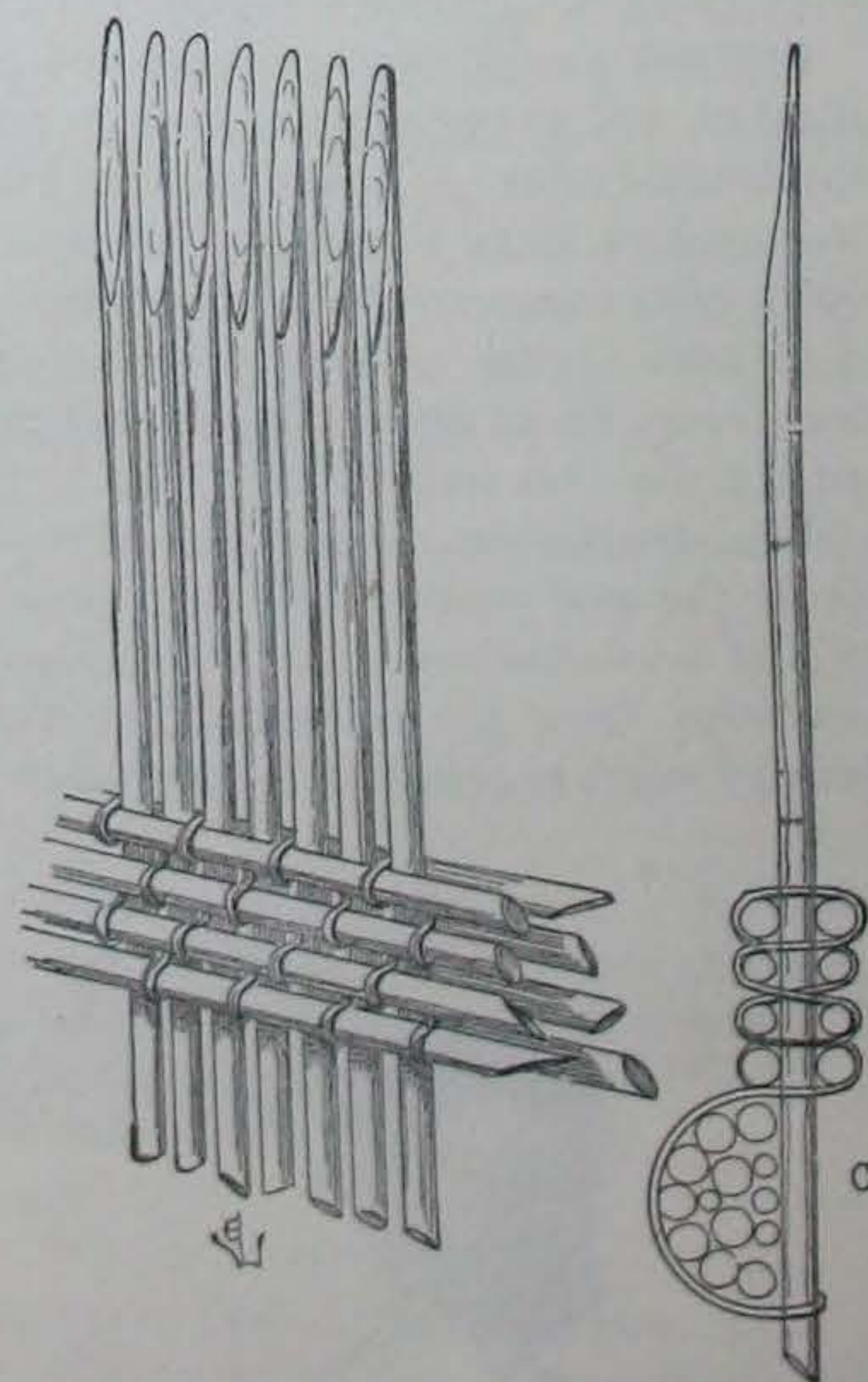
When the plan has been marked out, as shown in figure 24, they prepare bundles of canes and lotus. These reeds are carefully fastened together by bonds of byblos, and thus form a kind of posts whose length corresponds with the height intended to be given to the building, which is scarcely greater than from seven to eight cubits from the ground to the upper terrace. First, they fix the strongest bundles at the four external angles of the house (fig. 25). Other bundles are fixed at the internal angles, so as to be vertical. These external and internal bundles are fastened together by ties of byblos. The four angles being thus prepared, set up and kept in place by

* The Egyptian cubit is 20.6422153 in.



BUILDING OF PRIMITIVE EGYPTIAN HOUSE.—FIG. 25.

stays, bundles of canes are laid horizontally, so as to bind together the heads of the external posts at the four sides; and these horizontal bundles are relieved in their bearing by intermediate vertical reeds, between which are contrived the openings that will form the doors and windows. These external vertical reeds are tied to other internal posts made of reeds. Then the laborers engaged in tempering the clay set to work, building the reeds in the walls, except the external vertical ones at the angles and the horizontal crowning, which thus serve as setting-out stakes and guides for raising the walls. When these have reached the level *c*, they place on the large horizontal bundle a sort of trellis-work of reeds prepared beforehand, as shown in figure 26, and which is composed of a double row of reeds, between which other reeds placed very close are kept in a perpendicular position by means of plaited bonds of byblos. This trellis-work is kept vertical by other bonds which fasten the lower parts of the stalks of the reeds that form the trellis-work to the inside of the large horizontal roll above as at *c*. Then the clay-workers continue their work behind this trellis, and ramming their clay they give a bend outward to the ends of the reeds, so as to form a slightly projecting cornice. These reeds keep the clay thus rammed projecting, and allow the



STRUCTURE WITH REEDS.—FIG. 26.

curve to be terminated by a flat fillet which gives the level of the terrace. The workmen, who are patient and careful, execute these works very neatly, raising the clay on inclined planes. When the inner and outer walls are thus raised to their intended height, they place trunks of palm-trees, cypress, or sycamore on the top of the walls, according to the width of the rooms; then on these trunks, reed; then clay gently rammed so as to form the upper platform plastered with the same clay, kneaded with straw; and the heavier part of the work is thus completed. For the jambs and lintels of the doors and windows, they make use of reeds in the humbler dwellings, and palm-trunks in those of more pretension.

As the sunlight in this country is extremely brilliant, the windows are very small, and are furnished with lattice-work skilfully interlaced. If the habitations belong to persons of property, the walls are plastered with clay, like the terraces, and covered with a composition formed of the same clay and very fine sand or white stone-dust. Then come the painters who decorate the reeds and plastering with brilliant colors; the walls and ceilings of the interior are similarly treated; rush mats furnish the floor and cover the lower part of the walls.



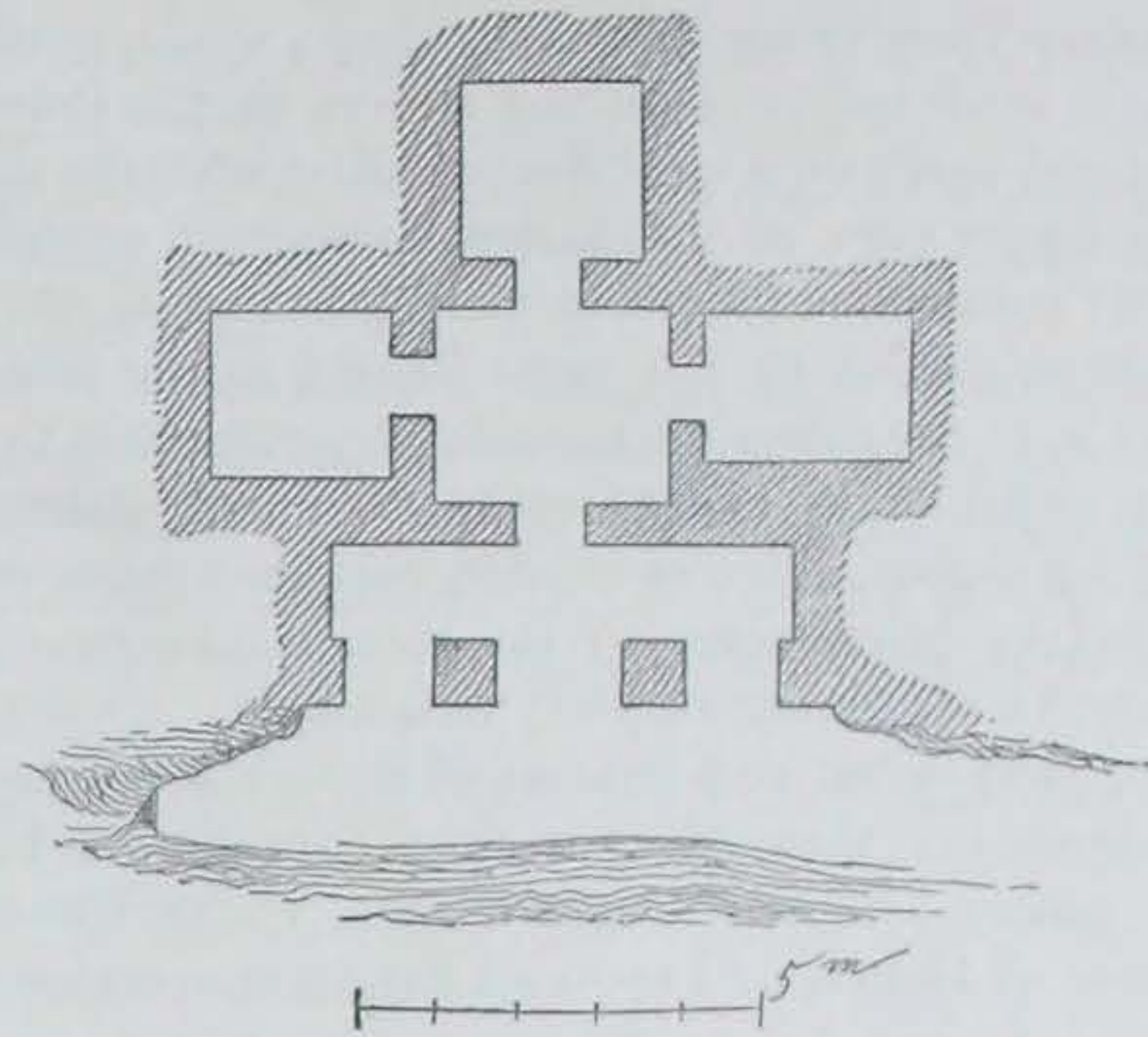
EARLY EGYPTIAN HOUSE.—FIG. 27.

Sometimes also we find a portico supported on bundles of reeds, and whose covering is made of wood and byblos, with a terrace of clay before the door, affording shade and coolness in front of the dwelling. This portico is the usual resort, and under it industrial occupations are carried on. To the women are assigned outdoor occupations; it is they who go to fetch the provisions, do the marketing, and carry burdens, while the men remain near the houses, weave, manufacture mats, pottery, and small works in wood, in which they are very expert. Figure 27 presents one of these habitations selected from among the higher class.

In the evening, at the time when the sun is disappearing below the horizon, the various families ascend the terraces to enjoy the coolness. The air being usually very calm, many light small earthen lamps filled with oil; and as these dwellings are generally surrounded with trees, these lights may be seen burning in the midst of the verdure, going, coming, and disappearing like glow-worms in the meadows.

The dwellings of those who live above the Delta differ in every respect from those we have just described. On the sides of the rocky hills which border the banks of the river, there are natural grottos in which these men originally took up their abode. But when the population increased it was necessary to hollow out excavations in default of natural caves.

This laborious, patient, and industrious race had the art of fabricating tools fit for this work; namely, hatchets and chisels of bronze, and even sledge-hammers made of very hard stones which are found higher up the river, at the place where it passes through rocks which



PLAN OF DWELLING EXCAVATED IN THE ROCK.—FIG. 28.

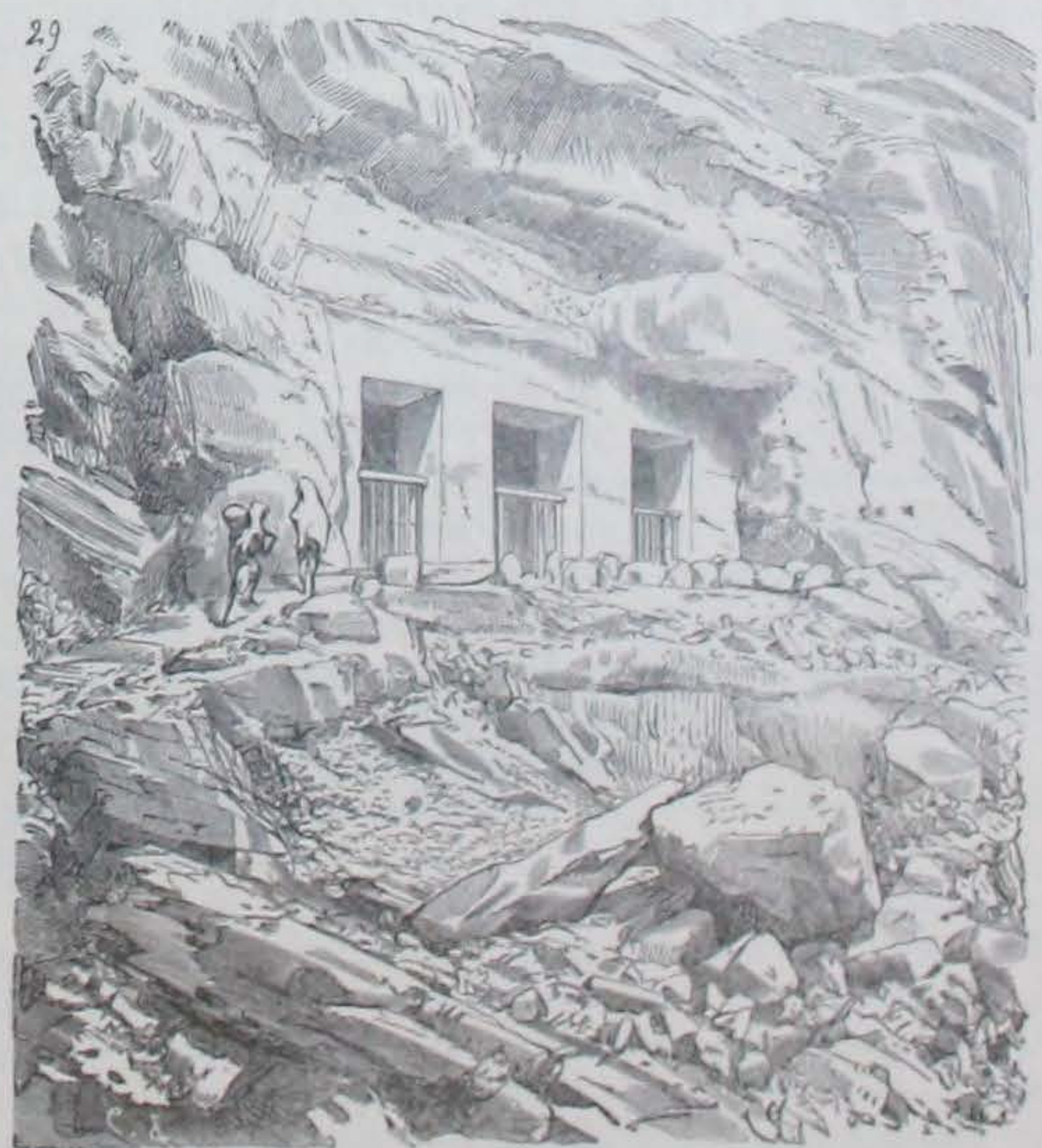
obstruct its course. Certain parts of these hills, moreover, present limestone in large masses, which can be pretty readily cut.

Whether it was that they preserved traditions of constructions in wood before their sojourn in these regions, or whether it arose from the example of the habitations of the more populous lowlands, certain it is that when the natives of the higher valley hollow out dwellings, they sometimes reproduce forms which remind one of wooden structures.

These dwellings,—we speak of the more recent—those hollowed out by human hands,—generally present, in plan, the arrangement shown in figure 28.

Taking advantage of a natural ledge on the sides of the hill, they hollowed out a kind of porch with one or two pillars left in the solid. At the back of the porch a doorway is pierced giving entrance to several small chambers excavated at right angles to each other.

The entrances to these habitations present an exterior such as is here depicted (fig. 29), appearing at a distance suspended along the escarpments. When the inhabitants catch fish, they dry it in the sun, whose heat is very great, and thus preserve it for a considerable time. When required, they add salt, which they collect on the shores of the marshes that border the sea below the Delta. These dwellings, dug in the sandstone or limestone, are very dry, as the hills contain no springs and the sky is always clear. Thus their inhabitants are robust, healthy, and active. They are skilful in managing their boats; and many of them pass their lives on the river, transporting to the Delta certain tools and arms fabricated by them, as well as products of the chase and fisheries, stone, gold, and metals which they get from the black race who are their neighbors, and perfumes extracted from



VIEW OF THE ROCK DWELLING.—FIG. 29.

certain plants. They bring back salt, stuffs, wood, pottery and many useful articles manufactured on the shores of the lower river. They are warlike, and carry on a continual conflict with the black tribes that inhabit the upper part of the valley, sometimes extending their own territory, and sometimes forced to yield parts of it.

Although subjected to the same *régime* as the inhabitants of the Delta,—that is to say, obeying sacerdotal authorities to whom the administration of all affairs is entrusted, these men of the middle valley are more independent, more energetic, and less submissive than their neighbors of the lower river to the theocratic government, which is divided among a multitude of petty despots.

One day, the bravest and noblest of them assembled in great numbers and chose for themselves a chief supreme—a king—in whose person the power hitherto dispensed was concentrated. This king bore the name of Menes, and soon all Egypt obeyed him.

* * * * *



CHAPTER X

THE DWELLINGS OF THE EGYPTIANS UNDER THE FIRST THREE DYNASTIES

DURING the reign of the early monarchs, the valley of the Lower Nile became a centre of agricultural and industrial production, which was already attracting many foreigners. Its commerce was flourishing, and wealth was accumulating in the hands of its fortunate inhabitants. The kings had gradually surrounded themselves with a numerous court, consisting in great part of functionaries, on whom devolved the duty of administering the government of the country. The life of all the citizens was regulated by laws; the monarch found his chief occupation in a rigorous scrutiny of everything. The configuration of the country was admirably adapted to this paternal form of government. The Nile, whose valley is of considerable width above the Delta, was the natural artery which facilitated travelling, the transport of goods, and surveillance over the whole country. In fact, at a hundred and eighty miles to the south—reckoning from the sea—the valley narrows more and more for about seven hundred miles, where the country inhabited by the blacks commences. There it becomes very narrow, and the course of the river is impeded by rocks. It is at the point where the ranges of calcareous hills approach each other, at the upper extremity of the Delta, that the first kings established their residence. Thus the Delta and all the upper course of the river was readily subjected to their surveillance; for from this point, beyond the hills on either shore, the country is absolutely a desert; while the river presents, as it were, a wide highway of water always navigable, whose shores, favorable for cultivation, and consequently habitable, are of inconsiderable extent. These shores were soon covered with villages; for the inhabitants of the narrow part of the valley left their caverns to live near the river. Unwrought stone and mud served for the construction of their dwellings. But a day came when a violent earthquake alarmed the inhabitants, and threw down many of these houses. Those of which the walls were thick resisted pretty well, but most of those whose walls were thin were destroyed or greatly shattered. The phenomenon hardly made itself felt in the Delta itself, but produced terrible effects in the upper part of the valley.

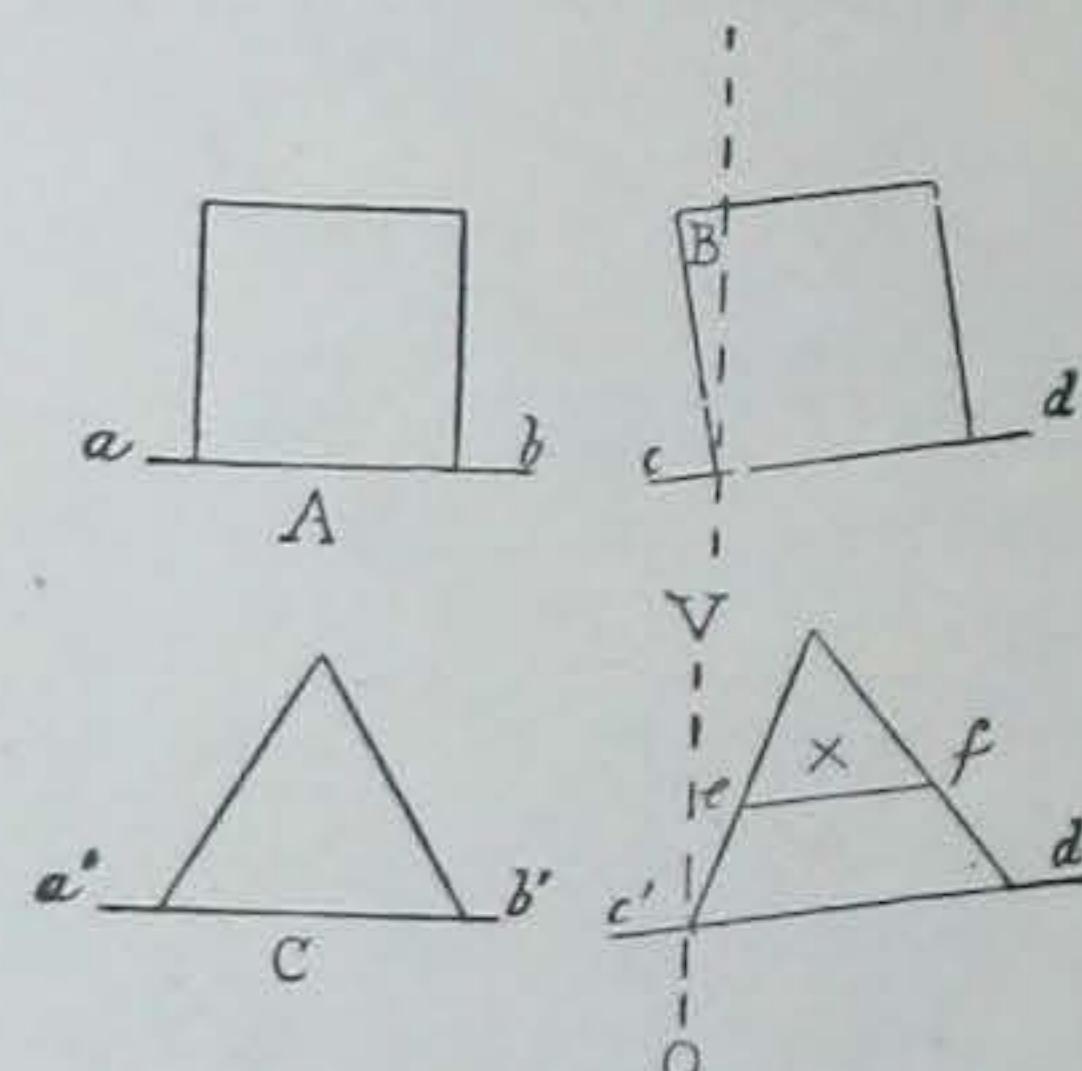
The Egyptians, having a great respect for the dead, and believing in the immortality of the souls of all animated beings, buried their relations—having secured their remains against corruption by special processes—in natural or excavated caverns; concealing their bodies under piles of stones and unburnt bricks, as a further protection to prevent their place of sepulture from being violated.

They gave to such piles the name of *Pi-rama*, which means height; or *Pi-re-mi*, according to others,—meaning *Splendor of the Sun*.

These piles are raised on a quadrangular base, as are all Egyptian buildings, and rise to a greater or less elevation according to the area of this base and the inclination of the faces. Now, after the earthquake just mentioned, the ablest of the Egyptian savants having ascertained that these pyramids, even when hollow and with walls comparatively thin, had not suffered any derangement, met to discuss the question whether it would not be advantageous to give future habitations the form of these erections.

Epergos and Doxius were consulted.

Doxius contented himself with saying that if the solid earth was shaken, man had not the power of avoiding the effects of this phenomenon, and ought to resign himself to its consequences,—entreating the gods, however, to render them less terrible. Epergos having observed that the Egyptians possessed a considerable acquaintance with geometry, took a bit of charcoal and drew on the wall the figure 30, below; then he said—

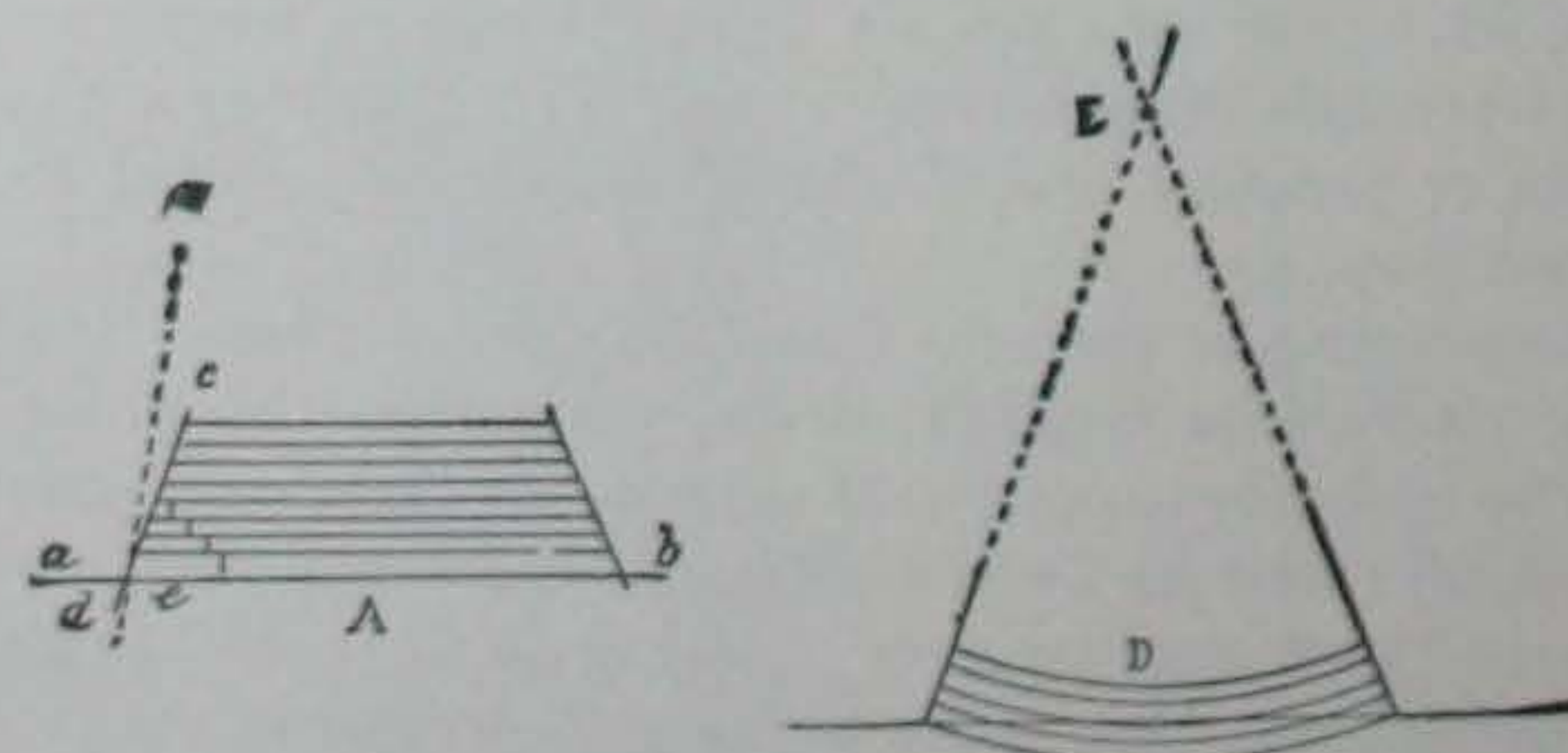


THE CUBE AND THE PYRAMID.—FIG. 30.

“If the solid A is placed on the level ground *ab*, it will keep upright by its own mass, but if the ground inclines, as *cd*, all the part B of the solid must break off and fall. If, on the other hand, the solid C is placed on a level ground *a'b'*, and if this ground inclines as *c'd'*, no part of this solid can break away, since the whole of it remains within the vertical line *vo*; this is why your pyramids stood while your houses fell.

“But these earthquakes, as I have had the opportunity of ascertaining elsewhere, shake the ground rather than disturb its level, or at least, this disturbance of level is scarcely felt; you need, therefore, only give your houses a slight inclination to keep them standing, in the event of an oscillation of the ground. But it is not necessary to terminate them in a point like your pyramids; for, suppose the part *x* of the pyramids taken away, the part *c', d', e, f*, which will remain, will not be less stable.”

The assembly listened attentively to Epergos. When he had concluded, an old man who was reputed to be one of the most intelligent of their savants, and who was accustomed to observe the stars in order to ascertain the periods favorable to the various agricultural operations,



PYRAMID WITH INVERTED CURVE BASE.—FIG. 31.

arose, and slowly advancing to the wall on which Epergos had drawn the diagrams given above, took the piece of charcoal in his turn, drew the figure 31, and said—

“Thy reasoning is good, Epergos, but neither the houses nor our pyramids are made in one piece; both consist of materials whose cohesion is limited. If, therefore, the house A inclines in the direction of the line *ab*, in consequence of a movement of the ground, though the line *dc* does not go beyond the vertical, the materials *e* may slip

under pressure, and thus the whole building be dislocated. But if we lay the courses of brick or stone according to the sketch D, taking E as the centre of the segments of the circle,—the point, viz., toward which the two slanting lines which form the faces of the walls converge,—the corner-stones will scarcely be affected by the pressure, and will not be able to slip, since they will not be on an inclined plane."

Epergos lowered his hands to the level of his knees in token of respectful acquiescence, and bowed his head; and the old man returned to his place amidst a hum of approval.

The royal decree promulgated at the recommendation of the assembly was to the following effect: that the walls of dwellings to be erected should be inclined according to an angle prescribed by the inspectors of buildings; that, if the houses were raised on stone basements, the courses must be laid in the direction of the part of a circle given by a radius equal to one of the sides of the triangle, whose apex should be the intersection of the slanting lines of the walls; that the same plan should be adopted for buildings made of unburnt bricks; that, moreover, the ancient and hallowed form of these houses, whether in plan or elevation, should not be altered in any way.



BUILDING THE HOUSE WITH INVERTED CURVE BASE.—FIG. 32.

The first houses, therefore, that were erected after this decree exhibited basements built as shown in figure 32; and guide-rods of canes were always employed to direct the masons.

The workmen, however, who were accustomed to build with unbaked brick, pise and canes, were not very skilful in working stone; they had as yet only bronze tools, which were quickly blunted, although they tempered them. For splitting the stones in the quarry, having observed that limestone naturally exists in beds, they laid bare the horizontal surface; then with bronze punches they sank a series of narrow oblong holes in a line—according to the required size of the block to be quarried—to the depth of four or five inches. That done, they drove into these holes very dry wooden wedges; they evenly wetted these wedges, which, swelling, split the stone according to the line traced by the sinkings.

Then with the help of wooden levers hardened by fire, they got the block out of its place. In consequence of the bedded nature of the stone, these blocks thus took the form of parallelopipeds, whose faces they rendered even, and which they combined.

Being a patient, laborious people, they ultimately succeeded in giving all these blocks a regular shape, and even in polishing them with hard stones, and in graving lines and characters upon them; for in consonance with the principle adopted on the banks of the Nile of having every particular of daily life formally determined, it is ruled that every building, indeed every object, should commemorate the reasons why such buildings or objects were set up, and the names

of those for whom they were set up; so that nothing is given over to oblivion. He, therefore, who is acquainted with the characters by means of which they represent facts, dates, and the names of things on stone, wood, pottery or metal, can learn all that concerns the past and the present of this people.

Such were the arrangements sanctioned by the kings of the first three dynasties, which lasted for seven hundred and sixty-nine years, and as during that time the inhabitants of the valley of the Nile never ceased working, and improving everything, they attained to a very high degree of development in the arts, in sciences, manufactures, and agriculture.

While the poorer class always built houses with clay and canes, those who had become rich, and who held offices in the state, were no longer content with abodes so simple and perishable. They began to use blocks of stone, unburnt bricks carefully plastered, and timbers squared and cut into boards. Nevertheless, the forms hallowed by primitive use had to be adhered to; and while changing the nature of the materials, the builders scrupulously preserved the appearance of the ancient dwellings.

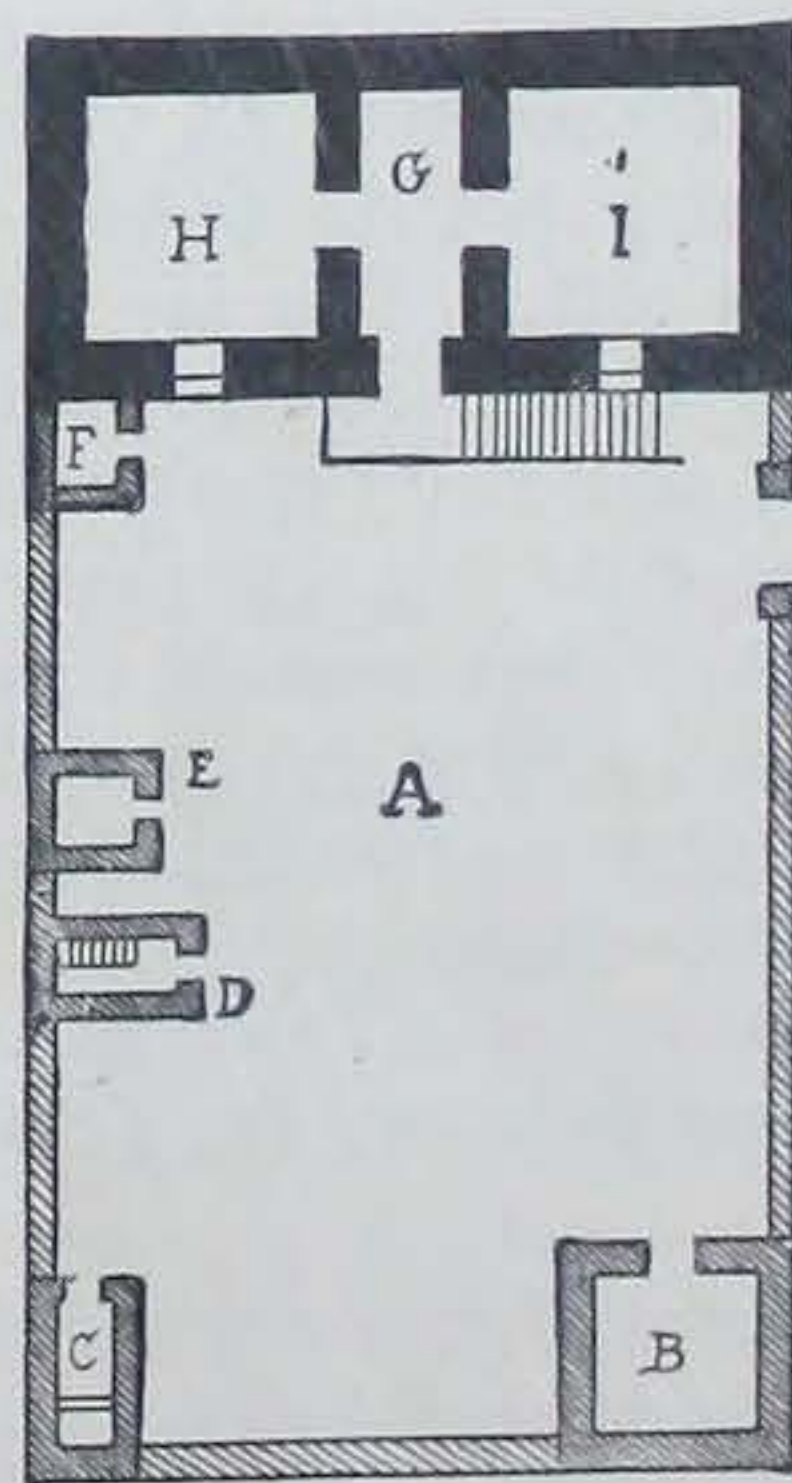
Porticos, however, were added; the rooms were more numerous, and the outbuildings more important.

In primitive times the inhabitants cooked their food in the open air; but they now began to provide places suitable for this purpose, invariably outside the dwelling,—especially as the family usually took their meals under the shelter of trees and awnings of stuff.

The domestic animals flocked about their owners during these meals; and there might be seen around the little tables on which the viands were laid, antelopes, cats, dogs, geese, and long-legged birds, living together on the best of terms, and diverting their masters by begging for food and by their familiarity. Each habitation was surrounded by a garden enclosed within walls of unburnt brick, and more or less extensive according to the means of the proprietor. These gardens were tended with extreme care, and contained rare plants growing in boxes, to preserve them from the scorching heat of the sun or shelter them from the wind of the desert, which, when it blew, speedily dried up the leaves and flowers. The gardens and dwellings, invariably placed on the banks of the river or of canals, had a

contrivance for working a chain pump pouring water into channels which, subdividing, irrigated the plantations. These hydraulic machines were worked by slaves or by asses.

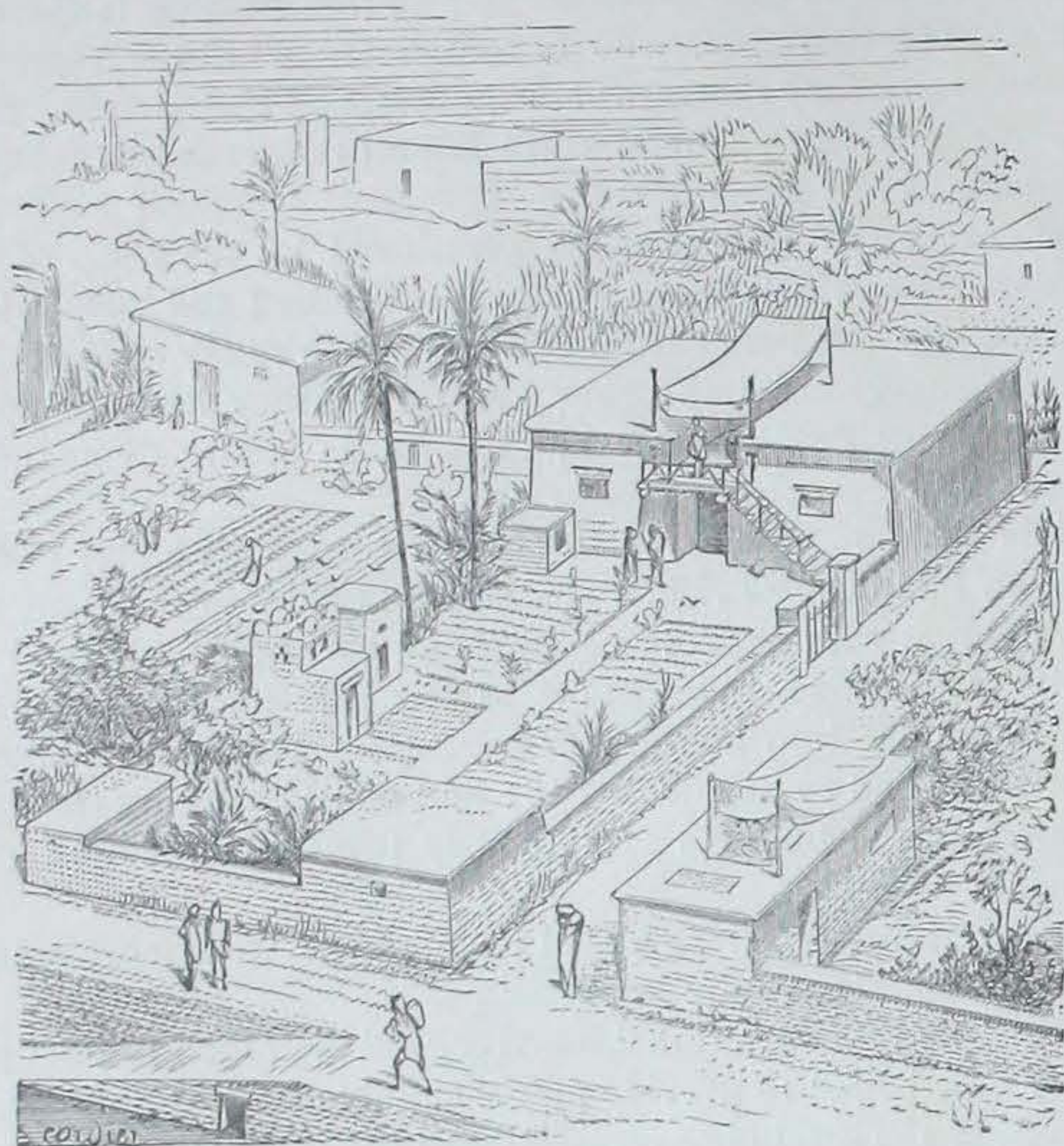
The simpler houses must first be noticed. Here is one of them, figure 33, consisting of a small garden A, with a pantry for provisions at B, latrines at C, dovecots at D, fowl-house at E, and oven at F for cooking. The dwelling part comprises a room G, open to the court, and two chambers H and I with beds. A flight of stairs outside made of wood gives access to the terrace.



PLAN OF EGYPTIAN RURAL DWELLING.
FIG. 33.

Figure 34 presents a bird's-eye view of this dwelling. Four poles, fixed in fastenings left in the wall, allow the placing of an awning over the central terrace, which is made lower, to afford shelter from the wind. It is there that the family love to assemble in the evening to enjoy the coolness.

We have said that the Egyptians were expert in the sciences of geometry and arithmetic. In fact, since the land in the valley which the Nile periodically waters and irrigates was wonderfully fertile, and the population inhabiting this valley was very numerous, it had from the earliest times appeared a matter of importance not to leave any part of the ground uncultivated. The territory was therefore divided into allotments with the greatest care, in such a way that each inhabitant was the possessor of the quantity of land he could cultivate or have cultivated. Accordingly, the ancient priests, who governed before the kings, scrupulously preserved plans, drawn on papyrus leaves, of the heritage of each possessor, to prevent litigation and encroachments. To draw these registered maps it was necessary to



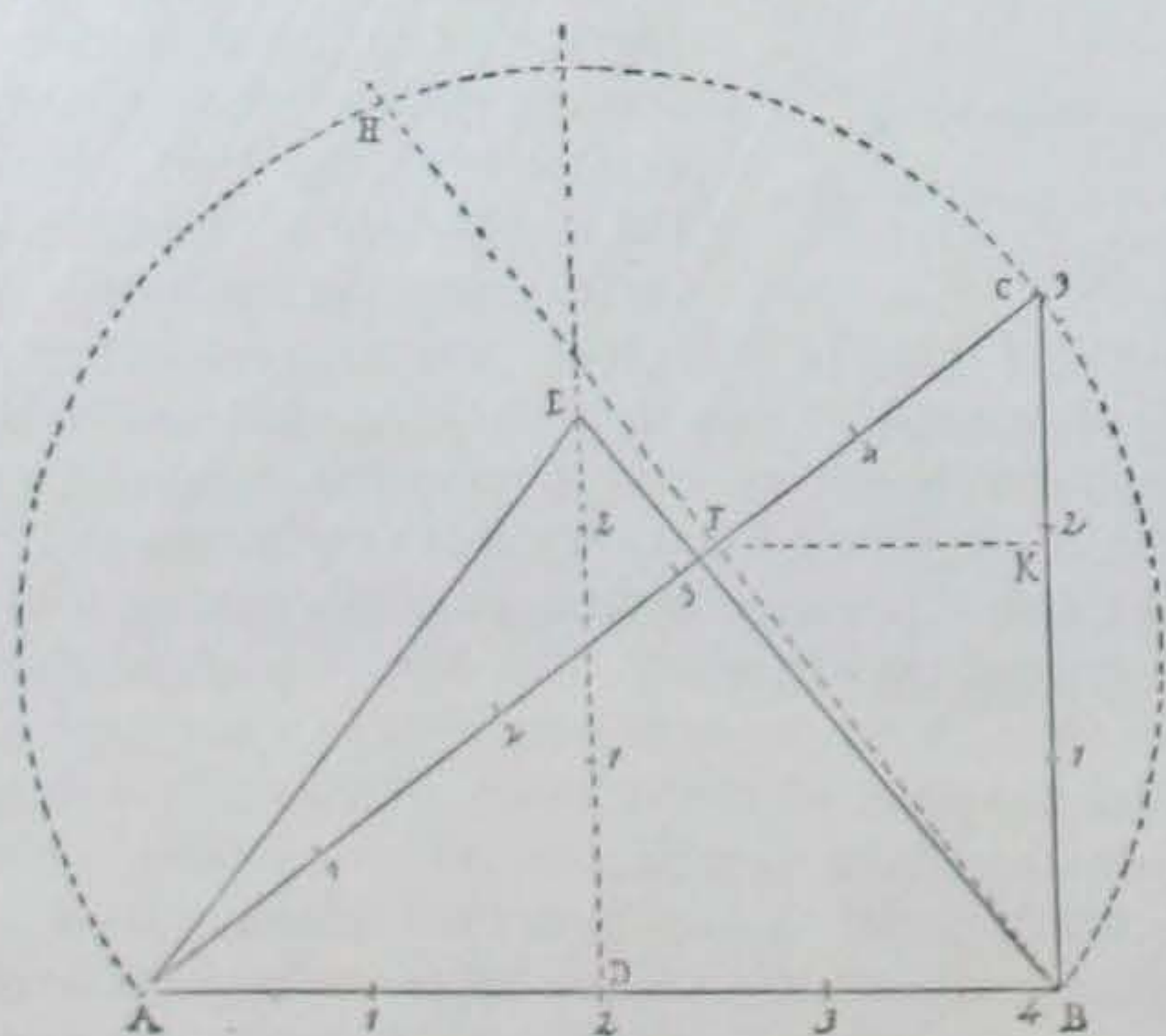
VIEW OF EGYPTIAN RURAL DWELLING.—FIG. 34.

have recourse to geometrical operations, which necessity gradually improved; and it soon became evident that the triangle was the figure by which an extent of territory could be exactly mapped out, its dimensions ascertained, and its various features—such as water-courses, parts inundated or dry, sandy, rocky, or muddy—be duly indicated. The triangle was accordingly regarded as the sacred figure,—particularly the right-angled triangle, whose base divides into four, the side into three, and the hypotenuse into five equal parts; so that this figure had to be adopted by architects in the construction of the palaces and temples.

The equilateral triangle and the rectangle were likewise regarded as perfect figures, and on this account the assembly mentioned above judged it wrong to listen to the observations of Epergos. As to the religious ideas attached to these figures, they must not be spoken of. They are mysteries known only to the priests; suffice it to say, that that side of the right-angled triangle which divides into three represents Osiris, the base divided into four, Isis, and the hypotenuse, Orus,—composed of the two; since the square of three is 9, the square of four 16, and the square of five 25, *i. e.*, $9 + 16$. This triangle, therefore, being the perfect figure, if employed in the setting out of buildings, could not—they argued—but produce excellent results; it was consequently prescribed, as well as the equilateral triangle.

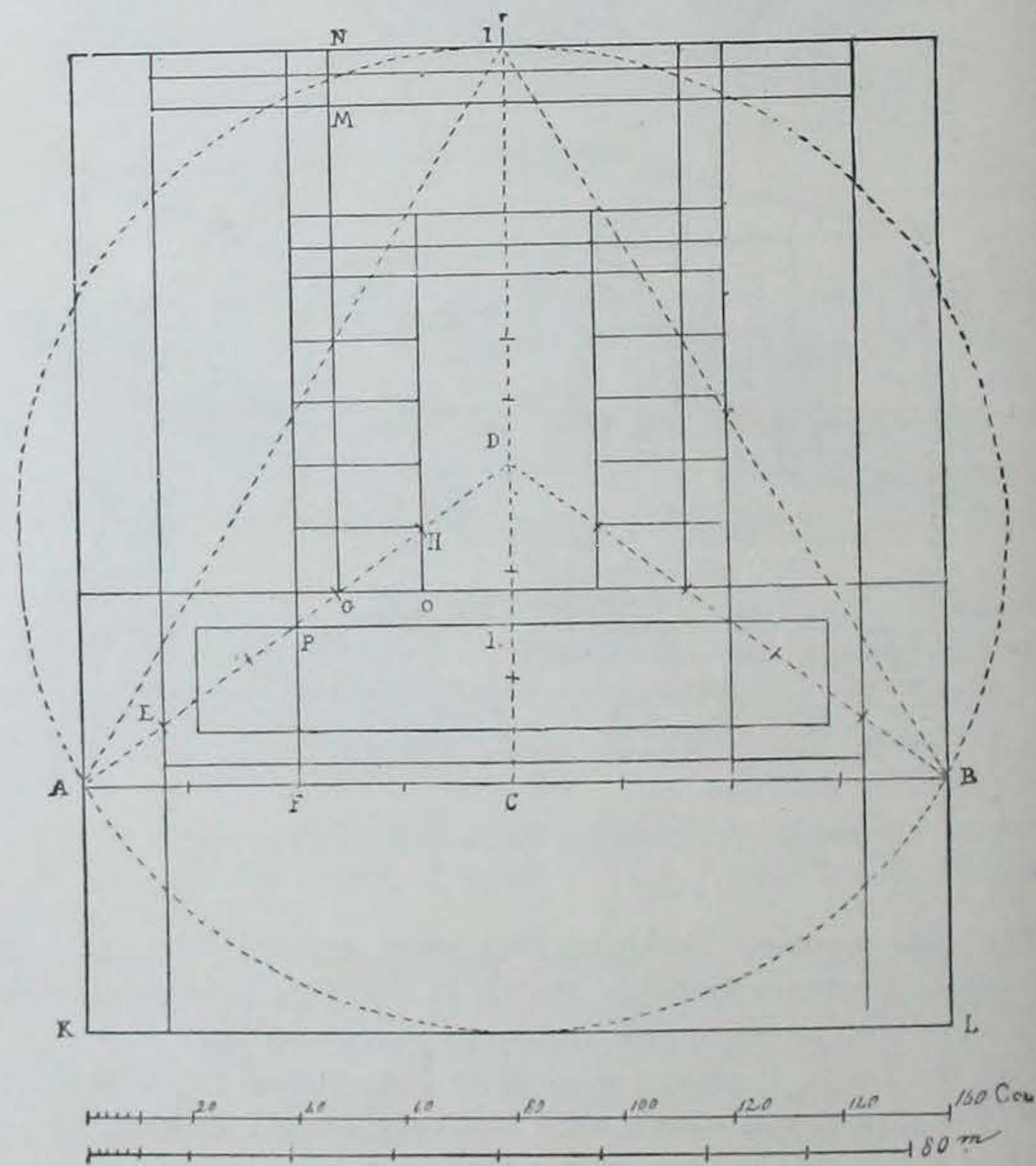
As regards the method to be adopted in applying the perfect triangle in buildings, this is how, after long consideration, the priests proceeded.

Let ABC (fig. 35) be the perfect triangle whose base contains 4, its



THE EGYPTIAN TRIANGLE.—FIG. 35.

side 3, and its hypotenuse 5 equal parts. On the centre of the base AB they erected the perpendicular DE, giving it a length equal to half the hypotenuse ($2\frac{1}{2}$); they then joined the points AE, BE, and thus obtained a triangle which they regarded as the stable figure *par excellence*. Inscribing the triangle ABC in a circle, they drew from the point B a perpendicular BF on the hypotenuse which they produced to H on the circumference of the circle. Then from the point of intersection, F, they let fall a perpendicular upon the side CB; next they divided each of the parts of the base into 12, thus making 48 subdivisions of this base. Each part of the perpendicular BC also divided into 12 parts gave 36. The $2\frac{1}{2}$ parts of the perpendicular DE divided (in the same proportion) gave 30. The hypotenuse gave 60. Now $60 = 5 \times 12$; $30 = 2 \times 12 + 6$ (half of 12); $36 = 3 \times 12$; $48 = 4 \times 12$. They thus obtained quantities divisible by 4, by 3, by 5, and by $2\frac{1}{2}$. Not satisfied with this first result, they divided each of the parts of the base into 100, and obtained 400 subdivisions. Similarly dividing the line DE, they obtained 250. The chord BH gave them 480 parts equal to the last; the part AF of the hypotenuse 320; the remainder FC 180; the perpendicular FK 144 or 12×12 . Thus the figure furnished decimal and duodecimal divisions. Now, in assigning proportions to buildings, the duodecimal system has the advantage of being divisible by halves, quarters, thirds, and sixths, and the decimal system by tenths. The combination of the two systems yielded serviceable relations. Thus the base AB divided by the duodecimal system into 48 parts is



METHOD OF SETTING OUT EGYPTIAN PALACE.—FIG. 36.

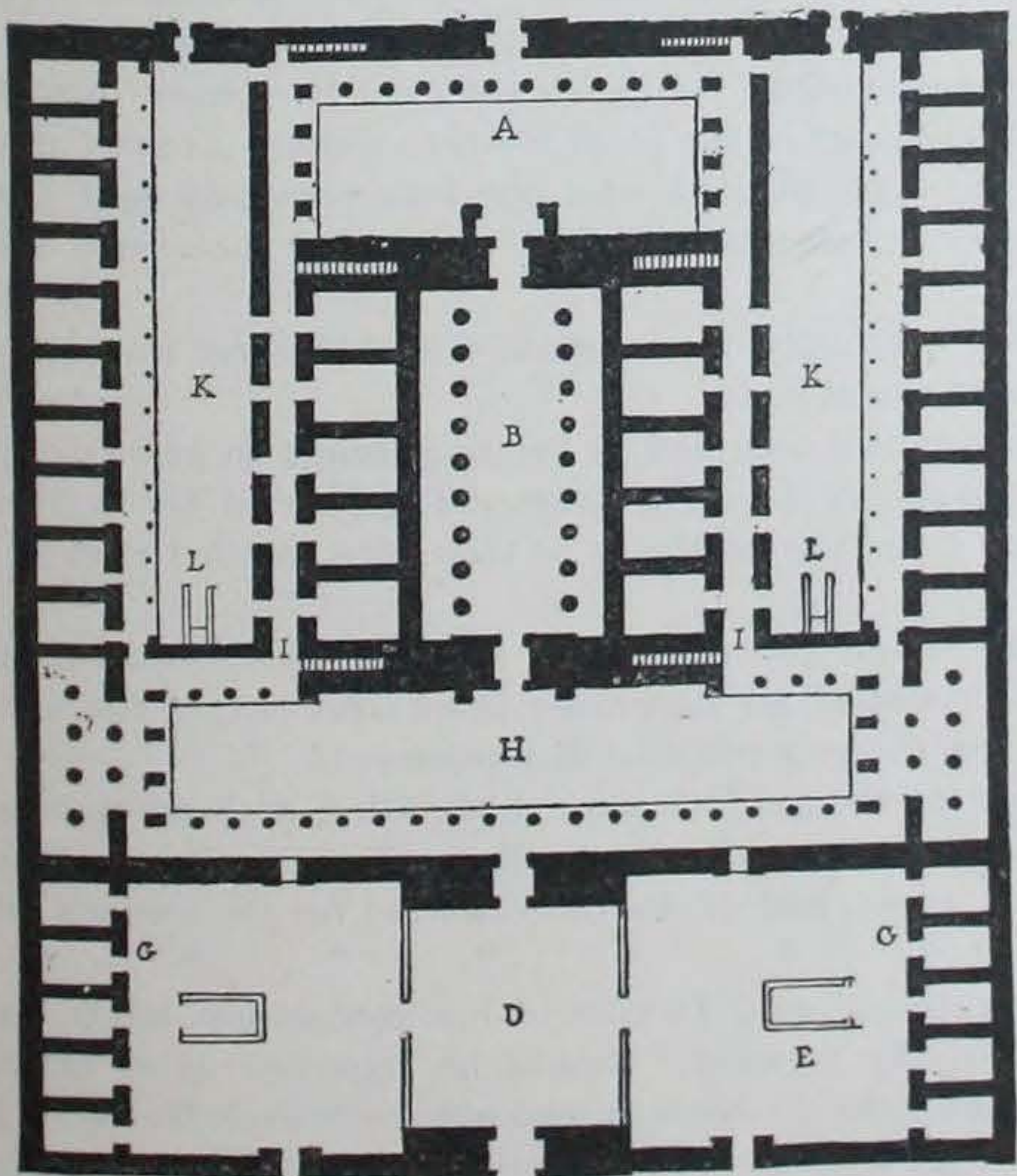
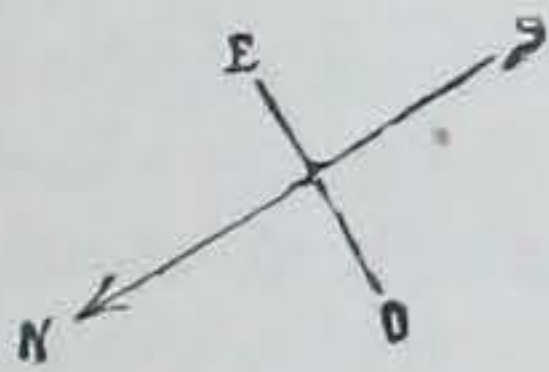
commensurate with the chord BH, divided by the decimal system into 480.

The builders therefore made use of this kind of standard of proportions in their constructions, it being left to their discretion also to employ the equilateral triangle, as we shall presently see.

Let us examine the palace of a nomarch, that is, a governor of a province in the reign of King Cerpheres, who ascended the throne seven hundred and forty-four years after Menes; a palace of contemporary date with the small dwelling we were describing.

The programme laid down by this nomarch for the guidance of his architect was this:—Two entrances to the palace, one public, the other for its inhabitants. On the public entrance side, a court with porticos giving access to a vast hall open to the sky in the middle. On the private entrance side, a large fore-court with quarters for the domestics on either side;—with kitchen and tank. Then a second court with open porticos and halls at each end. Entrances to the chambers ranged on both sides of the great hall, but

without direct communication with the latter. Two lateral courts with storehouses for all kinds of provisions. These buildings were to occupy a quadrangular area 270 feet in front, and about 310 feet in depth. The architect began (fig. 36) by fixing the line of base AB, 270 feet in length. He divided it into 8 parts of 34 feet each. Then he erected the perpendicular CD, to which he gave a length of 102 feet, and drew the two lines AB, BD, the length of each being 170 feet. From the points of division EFGH, he erected perpendiculars on the base AB, and from the point of division, C, a line parallel to AB. Taking AB as base, he drew the equilateral triangle ABI. He described a circle about this equilateral triangle. The tangent KL gave him the boundary of the outer court. The length of the hypotenuse CH being 34 feet, that of the base CO was 27 feet, and of the side OH, 20 feet. On the perpendicular OH produced, the architect measured 5 times 20 feet beyond the point H. From M to N he likewise measured off 20 feet. These lines, excepting those of the perimeter, gave him the centres of his walls. He was then able to mark in detail the plan (fig. 37). The public entrance with its court was at A; the great hall with its central opening to the sky, at B; the private entrance at C, with its fore-court D; the kitchen at E; the tank opposite, and the servants' quarters at G; the inner court with its porticos was at H, with the entrances to the rooms on the ground-floor by two passages at I. Those of the first floor were reached by two flights of stairs contrived within the pylones. At K the two courts for stores; at L were placed the latrines. At the two extremities of the court, H, were the halls open to this court for private gatherings.

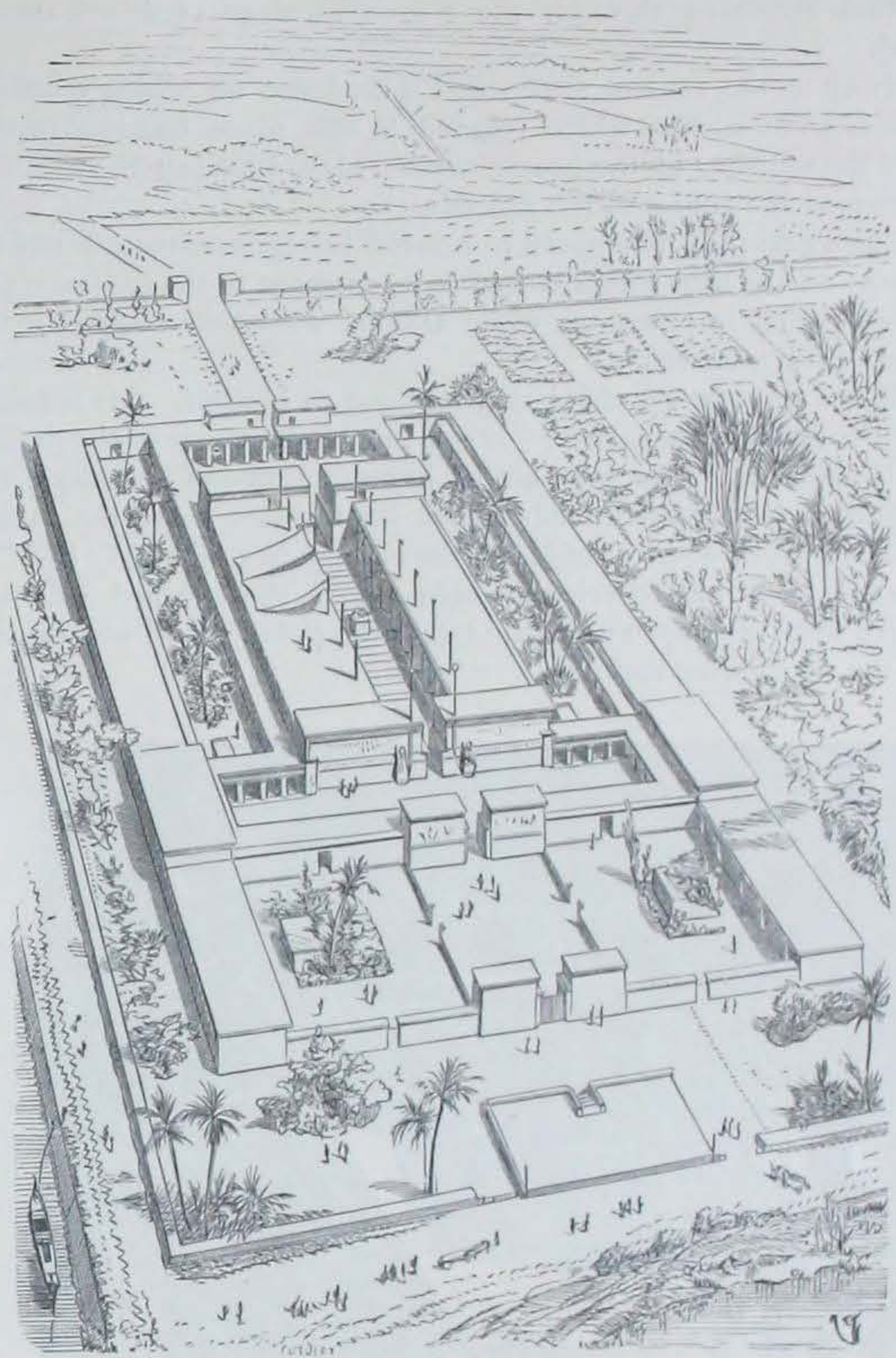


PLAN OF EGYPTIAN PALACE.—FIG. 37.

Figure 38 gives a bird's-eye view of this sumptuous habitation. Beautiful, well-kept gardens bordered the dwelling, which was built on the banks of the Nile; its grounds being traversed by a canal for irrigation.

But it is desirable to examine more closely the method of setting out adopted by the architect.

We take the principal hall with its porticos and its chambers. The builder had subordinated the central lines of the building to the divisions given by the base and hypotenuse of the perfect triangle PRD, whose base occupies the half of the breadth between the central lines of the



BIRD'S-EYE VIEW OF EGYPTIAN PALACE.—FIG. 38.

main block, we may divide this triangle PRD as we divided the great triangle ACD.

The base PR, then, would have a length of 68 feet, the side RD 51 feet, and the hypotenuse 85 feet.

A story of apartments was obtained over those of the ground-floor, and the stairs contrived in the pylones ascended to these rooms and to the terrace, covered, when required, with awnings.

Epergos and Doxius had an opportunity of visiting the dwelling of the wealthy nomarch, and were admitted by the steward of his domains with the courtesy habitual to the higher classes of the Nile valley. This officer received them at the eastern entrance, which was reserved for the public, and began by showing them the fore-court (see fig. 37, at A) furnished with porticos on three sides.

At each end the terraces of this portico were supported by square pillars, while columns of a cylindrical form were ranged along the outer pylone which formed the centre of the enclosure.

In front of the great hall stood an enclosure upon which was stretched an azure veil, and which formed a sort of porch. Two other pylones, having the interval between them closed by doors, formed the entrance to the great hall.

Epergos was never weary of admiring this interior flanked by two porticos, supported by lofty columns. All the central part, open to the sky, could be covered by awnings hung between poles fixed on the terrace. To these poles were fastened other awnings which formed two continuous tents on these two terraces, disposed with a view to the enjoyment of the evening coolness.

The stone columns and capitals, whose forms recalled that of the lotus bud, were covered with painting; they supported architraves of wood likewise painted in bright colors, and a cornice formed with canes as before described.

The ceilings of the two porticos supporting the terrace floor were in like manner made of wood painted. Through the opening left between the pylones, at either end of the hall, glowed the azure of the sky, while the interior was only illumined by the subdued and tinted

light that streamed through the woven awnings of divers shades (fig. 40).

Midway in the central nave stood a credence on which offerings were laid. The silence which reigned in this place was interrupted only by the murmur of the breeze, which played among the awnings and caressed the angles of the pylones.

Though naturally indisposed to reverie, Epergos seated himself for a moment on the step which served as a basement to the credence and appeared buried in reflection, while Doxius was conversing with the steward of the nomarch.

"What a singular people!" said Epergos to himself. "Is it greatness or weakness of character?—or can this be the abode of the living? There is about this palace an air of immutability—of serenity—like the cloudless sky which spreads above its terraces. Are the inhabitants changeable, or invariable like the climate in which they live?"

Roused from his reverie, Epergos asked the steward why the entrances were thus open up to the top of the pylones, and why the lintels of the doors were severed.



INTERIOR OF EGYPTIAN PALACE.—FIG. 40.

"Because," replied the steward, "it is the custom on certain solemn occasions to admit processions consisting of persons who bring the rents due to the nomarch. And in front of each corporation are borne very lofty standards. The height and splendor of these standards is a matter of rivalry among them. With this arrangement the standard-bearers can enter without lowering them. Each deposits its offering on the credence or sometimes at the feet of the nomarch, and the procession leaves the palace in perfect order by the other portal. The live animals offered to the nomarch are not admitted into the palace; but you will see a large platform on the western side, opposite the river, where the nomarch receives beneath a tent the dues paid in live animals, fruits, and grain."

Outside the doorway opening into the long private court, west of the hall, Epergos examined with curiosity two seated colossal stone

statues on either side of the gateway, and which he thought very beautiful.

The steward told him that the one represented King Cerpheres and the other his wife; and that these statues had been erected by the nomarch in their honor, and to testify his gratitude to them.

In fact, long hieroglyphical inscriptions graven on the pedestal recorded the names and extraordinary virtues of these two personages, and described the nomarch's grateful feelings toward his sovereigns.

This second court appeared to the visitors still more beautiful than the first; and the attention of Epergos was especially attracted by the two fine halls situated at either extremity, with their entrance pillars and the columns which supported the richly painted ceilings.

Following their guide into one of the lateral passages, they were allowed to visit some of the bed-chambers, which were then untenanted. Each of them contained a bedstead of painted wood, furnished with cushions and covered with linen tissues of various colors; a large chest, likewise of painted wood, to hold clothes; a chair, a small table, and a lamp. By day these bed-rooms were lighted only by the doorways left unclosed which opened on the passage. But the sunshine in these regions is so vivid that these rooms received a very soft and pleasant reflected light while they preserved a cool temperature. Their walls were decorated with paintings representing persons, and which were accompanied by explanatory inscriptions.

The bed-rooms of the upper story, opening on the terraces which formed the covering of the passages, were decorated in the same manner; and in front of the doors were hung awnings sheltering the interior from the sun's rays.

From these small terraces there was a view of the two gardens stretching lengthwise, in which were planted sycamores, palm-trees, mimosas, orange-trees, and some rare shrubs; two narrow canals irrigated them. On each side, facing the chambers, was to be seen a small portico of wood, fronting cells in which provisions of all kinds were ranged in perfect order,—fruits, grain, honey, vegetables, and drinks—wine and beer.

But these parts of the habitation were not accessible to persons not of the household, and the servants who had charge of these storehouses were responsible for their contents; they were quartered in the two end buildings of the great western court. Around this beautiful mansion were planted vast gardens, regularly laid out, with canals, fish-ponds, storehouses, and everything necessary for their cultivation.

What was especially pleasing in this residence was the order, regularity, and cleanliness.

Slaves, constantly occupied in keeping things in proper condition, were under the surveillance of overseers appointed for each department of work; and the negligent or lazy were recalled to their duties by the whip.

The steward had the control of each of these departments, and exacted an account of all that came in or went out, of the consumption, the stores, the receipts, and disbursements.

At the end of the gardens were sheds filled with animals in great number—oxen, horses, and asses; and in a large poultry-yard were to be seen fowls, geese, and ducks, carefully fed for the owner's table.

* * * * *

"The Egyptians," said Doxius to his companion, when they had taken leave of the steward, "should be regarded as an example to the nations; and the barbarians who approach their frontiers, if they have the least glimmer of common sense, will not fail to imitate them. The Creator has appointed them directors of the nations; if they are to perish, it is because the earth is given over to fools—to the spirit of recklessness and disaster."

"Well!" returned Epergos, "shall I tell thee my whole feeling on the subject? . . . This country oppresses me; this people with its regulations and laws embracing every particular of life, its prudence and respect for traditions; this ever cloudless sky; this river with its punctually recurring irrigation; these dwellings and gardens where everything is methodic and calculated; this immutable social hierarchy—all this wearies me to the last degree. My blood seems to stagnate, and my mind to become a blank. I must away!"

"I shall stay."

"Adieu, then."

(TO BE CONTINUED.)

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PERSPECTIVE VIEW OF DESIGN NUMBER 333

FLOOR PLANS AND DESCRIPTION ON PAGE 167

WORKING PLANS, DETAILS, SPECIFICATIONS, &c.

See notes below about Alterations and Special Designs.

WE have been asked why we do not give full Working Plans, Drawings of Details, Specifications, &c., in this book. We answer that to do so would reduce the number of designs in a book of this size to three or four. Most people want to see the plans and descriptions of a large number of houses, to decide which they like best. Besides, our Working Drawings (the Details are shown full size) are on such large sheets that it is impossible to reduce them to book or paper size without losing much of their value. It is important, also, that the owner should be in correspondence with the architects to have everything explained that he does not understand, and to advise him during the progress of the work.

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A BILL OF QUANTITIES,

which gives the true quantities of all the materials required, and enables the owner to make all of the purchases of materials, if he prefers, and to build the house by days' work.

In addition to the foregoing we furnish

A COLOR SHEET,

which gives a number of elevations properly colored, with directions for mixing and applying the paints, the right kind of brushes to use, &c. This sheet not only instructs the painter, but enables the owner to do his own painting, if he prefers.

We also send duplicate blank forms of

BUILDING CONTRACTS

ready for use in case the owner wishes to build by contract.

The reliability and thoroughness of our work is attested by hundreds who have built from our Drawings and Specifications. Please see "Testimony of those who have built from our Plans," on the inside cover pages of this book.

PRICE LIST OF PLANS, SPECIFICATIONS, ETC.

UPON receipt of price annexed we will send by mail or express, charges prepaid, the Working Plans, Specifications, Detail Drawings, Bill of Quantities, Color Sheet, and Building Contracts for any of the designs mentioned below. Remit to The Co-operative Building Plan Association, 191 Broadway (P. O. Box 2702), New York City, N. Y. If preferred, we will send C. O. D.

No. 312.—Price for Working Plans, &c. \$15.00

" 313.— " " " " 18.00

NOTE.—We will furnish Plans, &c., for the above two designs for either the special construction described on page 169, or for ordinary construction, as the client may elect.

No. 314.—Price for Working Plans, &c. \$20.00

" 315.— " " " " 20.00

" 316.— " " " " 20.00

" 317.— " " " " 20.00

" 318.— " " " " 22.00

" 319.— " " " " 20.00

" 320.— " " " " 20.00

" 321.— " " " " 20.00

" 322.— " " " " 25.00

" 323.— " " " " 25.00

" 324.— " " " " 30.00

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" 326.— " " " " 25.00

" 327.— " " " " 30.00

" 328.— " " " " 35.00

" 329.— " " " " 35.00

No. 330.—Price for Working Plans, &c. \$25.00

" 331.— " " " " 30.00

" 332.— " " " " 25.00

" 333.— " " " " 35.00

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" 343.— " " " " 40.00

" 344.— " " " " 40.00

" 345.— " " " " 30.00

" 346.— " " " " 50.00

" 347.— " " " " 45.00

" 348.— " " " " 35.00

" 349.— " " " " 40.00

No. 350.—Price for Working Plans, &c. \$45.00

" 351.— " " " " 45.00

" 352.— " " " " 60.00

" 353.— " " " " 50.00

" 354.— " " " " 75.00

" 355.— " " " " 60.00

" 356.— " " " " 60.00

" 357.— " " " " 70.00

" 358.— " " " " 75.00

" 359.— " " " " 75.00

" 360.— " " " " 90.00

" 361.— " " " " 90.00

" 362.— " " " " 60.00

" 363.— " " " " 100.00

" 364.— " " " " 140.00

" 365.— " " " " 120.00

" 366.— " " " " 250.00

" 367.— " " " " 60.00

" 368.— " " " " 20.00

" 369.— " " " " 30.00

NOTE ABOUT ALTERATIONS

ANY internal changes required, such as shifting partitions to make rooms larger or smaller, adding closets, building fireplaces in place of flues, &c., can be clearly indicated to the workmen by the owner himself, when the large Working Plans are spread out before them. Therefore, if the alterations are unimportant, the Working Plans and Specifications as per price list above are quite sufficient. Where the desired changes alter the external dimensions and, consequently, the appearance of the elevations, it is generally advisable to have us make the changes.

For altering plans we charge extra, but do not set a price for same as we cannot tell how much work is involved until we know what the alterations are. Upon receiving a description of the alterations required, which should always be accompanied with a diagram, no matter how roughly drawn, we will make a price according to the amount of work involved.

ABOUT SPECIAL DESIGNS

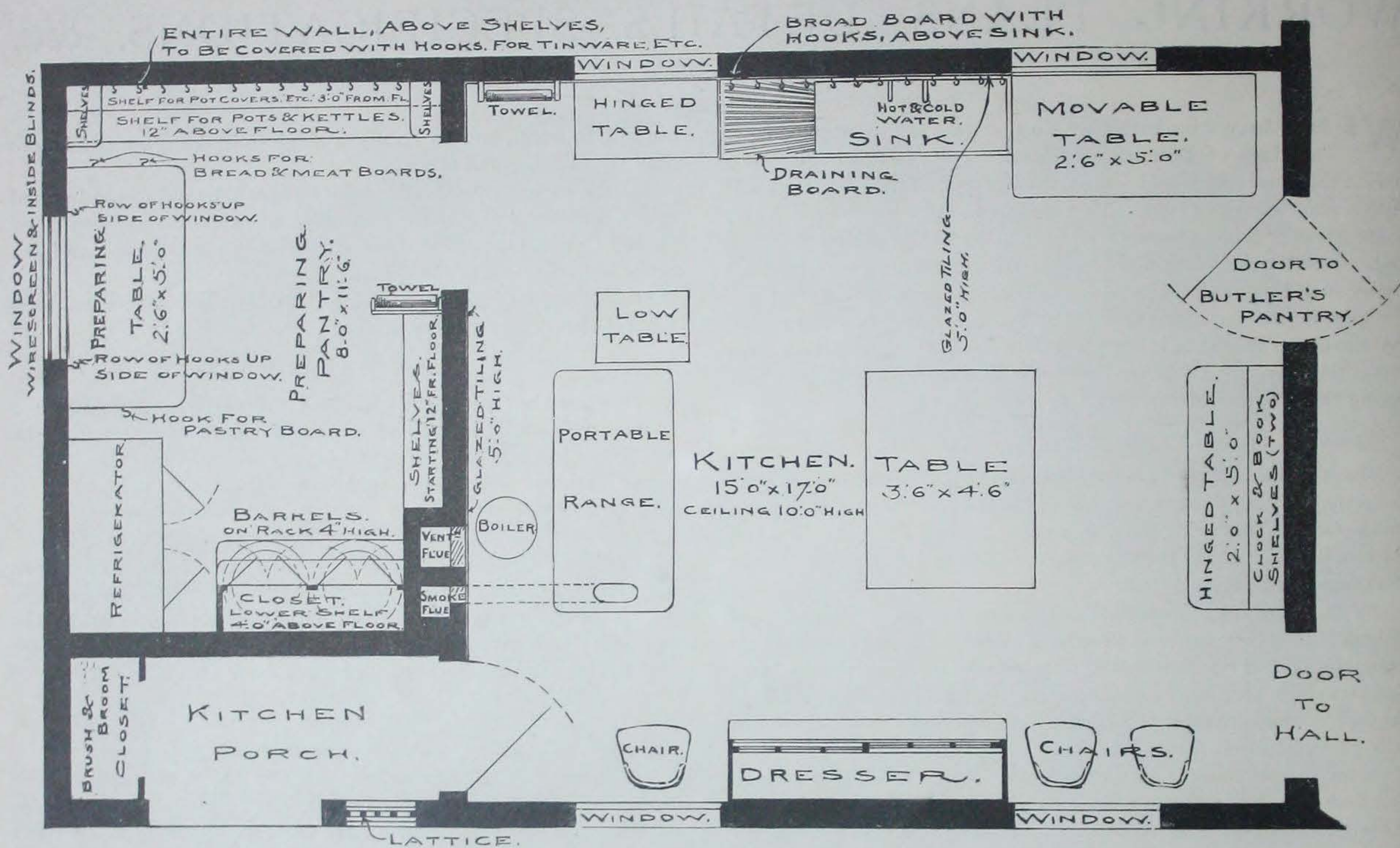
If none of our designs, or modifications of them, suit the intending builder, we are glad to make original designs to meet their requirements, or work out and put in proper shape any rough drawings of their own.

ESTIMATES GUARANTEED.

The costs of structures as given in our books must be regarded as only approximate. In books, it is impossible to give costs that would prove to be correct for every locality. Therefore, from and after this date, for those who order Working Plans, Specifications, &c., for any designs found in our books, we will make careful, special estimates for each design, based on their local prices for materials and labor. We will guarantee that contract can be paid at figures not exceeding such estimates, otherwise our clients may send back to us the Working Plans, Specifications, &c., and we will return to them the fees paid for the same.

January 1, 1888.

THE CO-OPERATIVE BUILDING PLAN ASSOCIATION, ARCHITECTS, 63 Broadway, N. Y.



MARIA PARLOA'S PLAN FOR A MODEL KITCHEN

* A MODEL KITCHEN

BY MARIA PARLOA

NO room in the house requires more thought and care for its construction than the kitchen. The aim should be to arrange it simply, and yet so conveniently that work may be done with the fewest steps and the least loss of time. There is such a thing as having so many improvements that the whole machinery becomes complicated, and a great deal of time and labor is needed to keep it in order.

The size of the kitchen is an important matter. Although the room should be spacious enough to contain sink, range, table, dresser and chairs, and to give ample opportunity for free movements, it should not be so large as to oblige one to make many steps to and from sink, table, range or pantry. A good size is 15 x 17.

The ventilation is a prominent factor of the comfort of not only those who work in the kitchen, but of the entire household. If the room lack good ventilation, the strength of those who work in it will become exhausted sooner than it should, and they will become unnecessarily irritated. Besides, the odors of cooking, which should pass to the open air, will instead escape to all parts of the house.

The room should be high, with large windows that can be dropped from the top. When the kitchen is located in a one-story extension the ventilation may be made almost perfect by means of a skylight or ventilator in the roof. In any case a ventilator may be arranged in the chimney. No matter how excellent the room may be in all other respects, it will be a failure unless there be light in plenty and good ventilation. Let these matters be among the first that are taken into consideration. There should not be a part of the kitchen or its closets which the light of day does not reach. Health and cleanliness demand this. When a house is small and

[* Copyrighted]

economy must be rigorously observed, the kitchen chimney will be used also for other rooms, but when expense need not be taken into account, it will be well to have the kitchen chimney entirely separate. This is one of the best ways to prevent all the odors of cooking from reaching other rooms.

Every part of the kitchen, pantry and closet, except the ceiling, should be finished in such a way that it may be washed. Nothing is better for the flooring than hard wood. If the floors are to be covered, no better material than lignum can be used. It is soft, clean and durable. Oilcloth is very cold and is the cause of a great deal of rheumatism.

It is well to have the wood-work such as to require oiling only, and the walls should be painted a rather light color. When possible, the walls about the sink, tables and range should be tiled. Tiles seem to be rather expensive at the outset, but in the long run it is true economy to use them, as they will last as long as the house. They may be easily kept bright and clean. The time will come when few people will think of finishing a kitchen without them. The English or Dutch tiles should be used, and blue and white should predominate.

Lack of table room is a drawback met with in most kitchens. There ought to be an abundance of such room, so that when a meal is being prepared or served there need be no crowding or confusion, and it may be obtained by having two or three swinging tables in the room. When they are not in use they may be dropped.

The sink should be large,—there is nothing better than iron,—with a sloping and grooved shelf at one end, on which to drain dishes. It should not be enclosed. Every dark, enclosed place in a

kitchen is a source of temptation to the slovenly. Let the light reach every part of the room. At the right hand of the sink have a long, narrow table containing two drawers for towels. Unless the walls above, below and at the sides of the sink be tiled, they should be finished with hard wood. If tiles be used, have a broad capping of hard wood extend across the upper edge of the top row, in which to put hooks for various small utensils that are in frequent use about the sink. Under the sink have more hooks for dish-pans, dish-cloth, etc.

There should be a door between the kitchen and the china closet or butler's pantry. This should be near the sink and the pantry. On the opposite side of the kitchen a dresser should be built between the windows. Here can be kept the kitchen table-ware and various utensils. The shelves each should have a groove, in order that platters and other dishes may be placed on edge. There should be two drawers, and below the drawers, two closets with shelves. The doors of the upper part of the dresser should be made in part of glass, and should slide.

In the centre of the kitchen have another table about $3\frac{1}{2} \times 4\frac{1}{2}$ feet. This should contain a drawer for knives, forks, spoons and other utensils that are in frequent use in that part of the kitchen. Have a small table also, about the height of the range. This is for use as a resting place for utensils used when griddle-cakes, omelets, waffles, etc., are made. When not in use it may be moved aside. Between the door to the hall and that to the china-closet have a swinging table or a settee table; the latter being that kind which serves as a seat when not in use for ironing or other purposes. Above the table have two shelves for cook-books and other books, and a clock.

Now comes the question of a range. Which shall it be—a set or a portable range? There are points in favor of each. Set ranges occupy less room, permit of roasting and broiling before the fire, and insure a constant supply of hot water. But there are disadvantages; they do not respond quickly to checks and draughts, they consume a large amount of coal, the brick hearth becomes very hot and uncomfortable to stand upon, and there is only one side to approach, which necessitates considerable lifting and moving of utensils.

A portable range can be so placed that it will be possible to walk all around it. It can be run with about half the quantity of coal required for a set range. It responds quickly to the opening or shutting-off of a draught. One's feet do not become heated by standing near it. There are no dark corners. It does away with the necessity of much lifting of heavy utensils. And it can be so managed that there shall be a hot oven at any time of the day.

But with a portable range the supply of hot water is limited, the roasting must be done in the oven and the broiling over the coals.

The window seats should be broad, that a few pots of flowers

or herbs may be placed on them. There is no other room in the house where plants will grow so well.

Convenient to the range and sink there should be a large pantry—about 12 ft. x 8 ft. The window should have a wire screen and inside blinds. A large, strong table, with two drawers, should be placed before this window. Have hooks on the ends of the table on which to hang the pastry-board, the board on which cold meats are cut, and that on which bread and cake are cut. The rolling-pin, cutters, knives and various small utensils may be kept in one drawer, and spices, flavoring extracts, baking-powders, etc., in the other.

The wall at one end of the room should be covered with hooks on which to hang saucepans and other utensils. About one foot from the floor there should be a strong, broad shelf, on which to place heavy pots and kettles. Two feet above it there should be a narrow shelf for the covers of the pots and saucepans. By this arrangement all of these utensils may be kept together and always in sight, and no time need be lost in searching for any of the articles.

A number of shelves may be placed between the window and this end of the room, on which to keep materials used very frequently, such as sugar, salt, rice, tapioca, etc.

In the frame of the window, but within easy reach, put hooks, on which to hang spoons and an egg-beater.

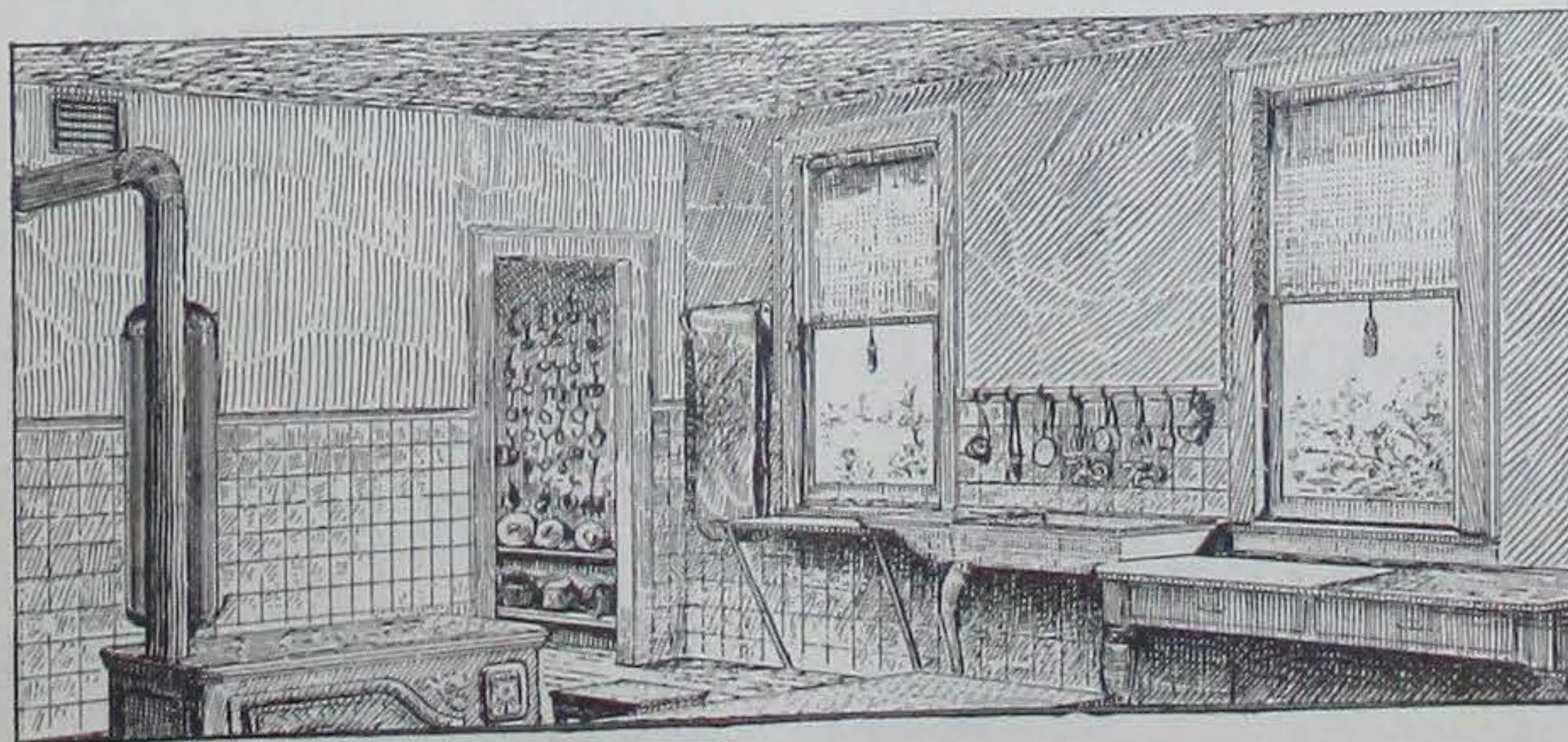
At the lower end of the room have wall-closets built about four feet from the floor. The shelves within them should be about twenty inches wide and the doors should be supplied with locks. Under the closets have a strong rack, four inches high, on which to keep barrels. The rack secures a free circulation of air under the barrels, thus keeping their contents sweet.

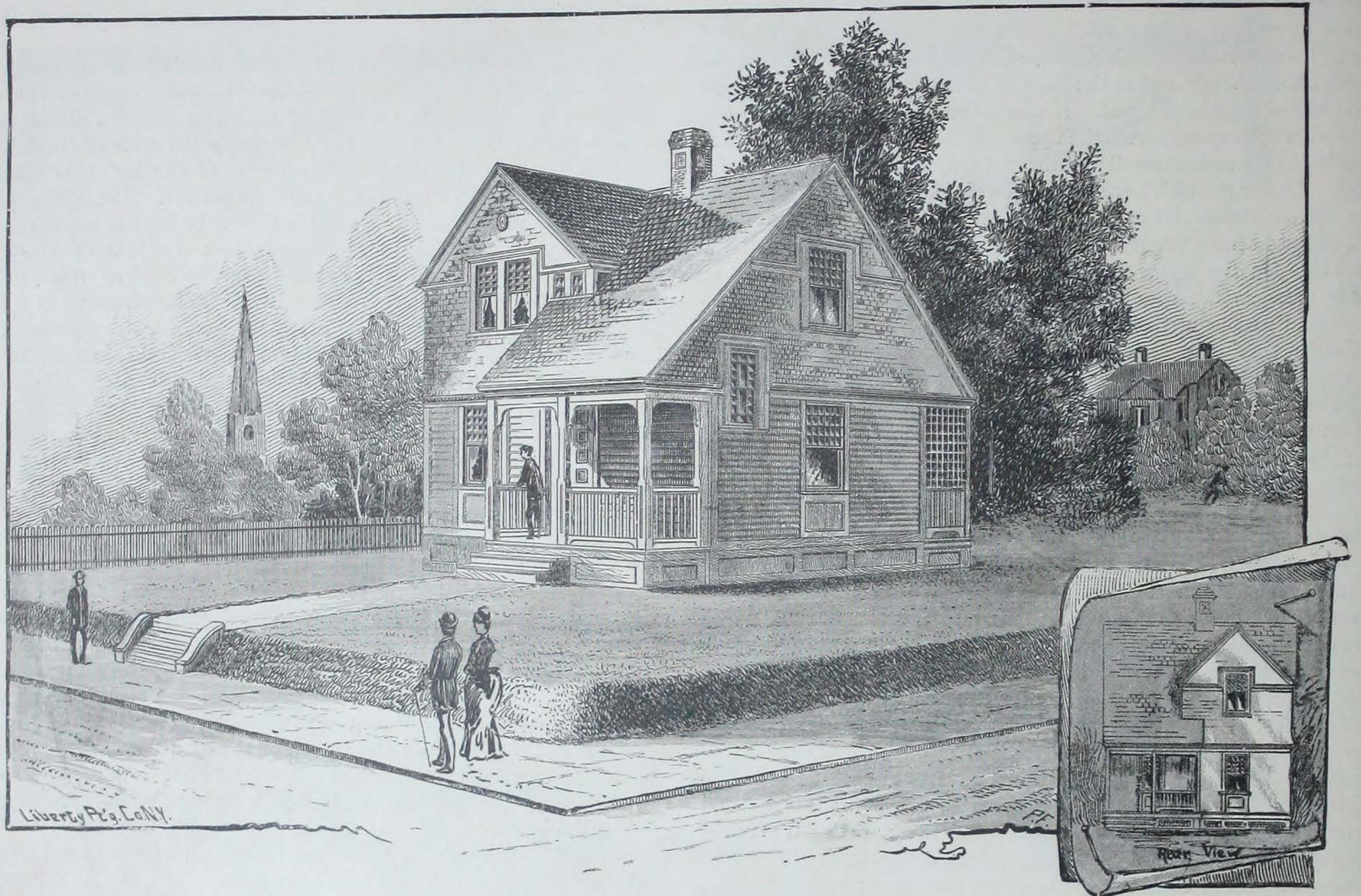
On one side, running the length of the room, have shelves, beginning a foot from the floor and running as high as the top of the wall-closets. On the lower shelves may be kept buckets and jugs, while the upper ones will accommodate mixing bowls, measuring cups, baking and mixing pans, and, indeed, all of the utensils for which space has not already been provided.

At the end of this row of shelves have a place for a towel, so as to avoid the trouble of going to the kitchen whenever the hands require wiping.

With this arrangement of the kitchen and pantry the cooking and the washing of dishes can be done in a small space, steps and time can be saved, and half of the kitchen will generally be unused and ready for the servants' table or any other purpose. The points kept in view throughout are—concentration of work, good light and ventilation, ample table room, cleanliness, and the giving of an attractive appearance.

It is understood that there is a cellar or cold room convenient to the kitchen.





DESIGN No. 312. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 312

SIZE OF STRUCTURE: Front, 24 ft. Side, 24 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 9 ft.; Second Story, 8 ft.

MATERIALS: Foundation, wood posts; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$600, complete.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Designed for construction in the manner described on page 169, viz.: Framed with boards or planks, and without building the regular frame of 2 x 4 in. or 2 x 3 in. studding.

This method of construction does not betray itself on the exterior, as clapboards and shingles are used outside, and variety and picturesqueness of design are obtained.

The interior is finished with tough manilla building paper of a dull, red tint, making a good finish, and being warm and agreeable to the eye.

If constructed in the ordinary way, and with plastered walls, the cost of this cottage would be about \$900.

No cellar.

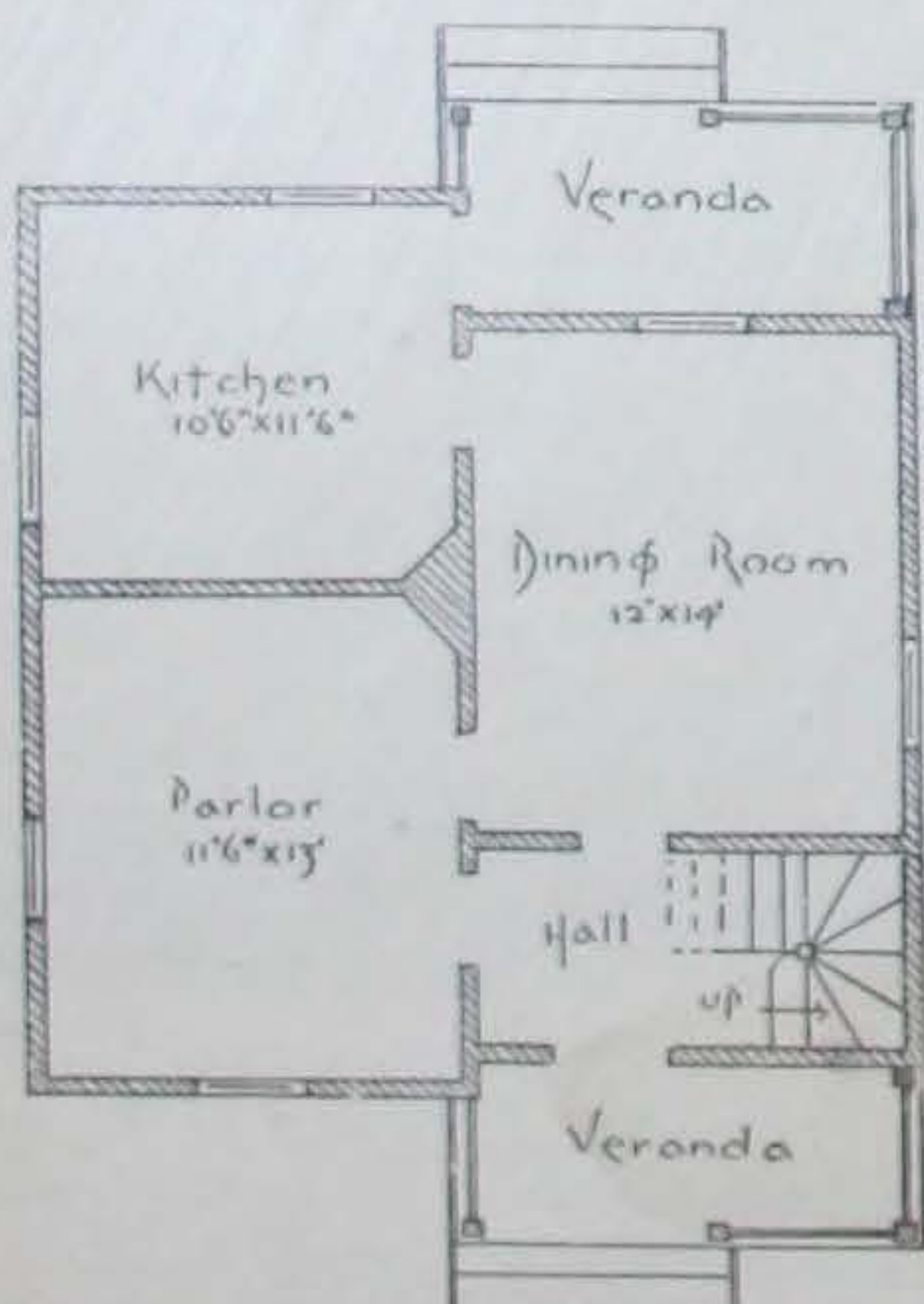
Much depends upon the colors used in painting. The architect's directions should be followed faithfully in this respect, as he knows, or should know, the best colors to use to enhance the beauty of the whole.

NOTES

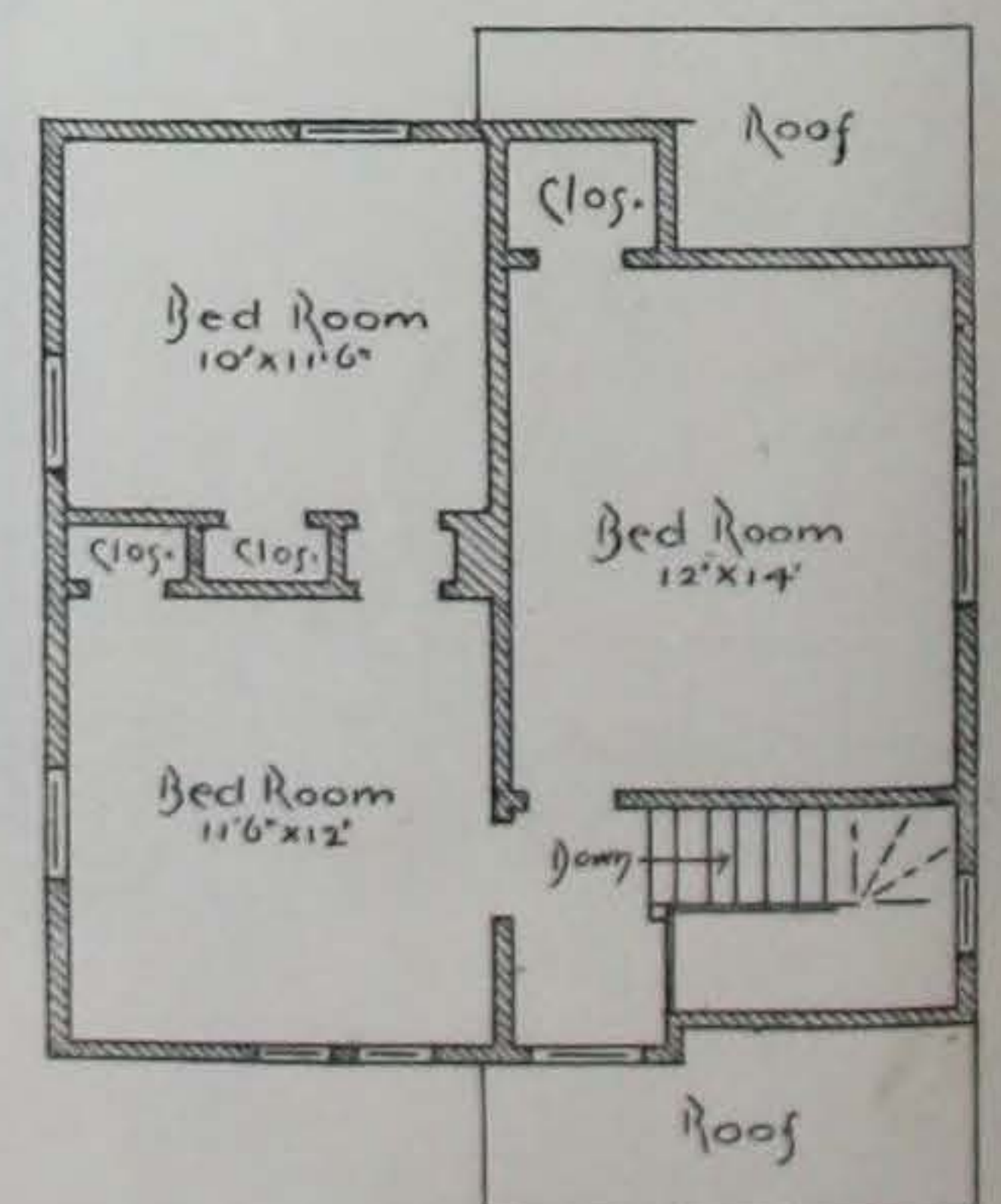
The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

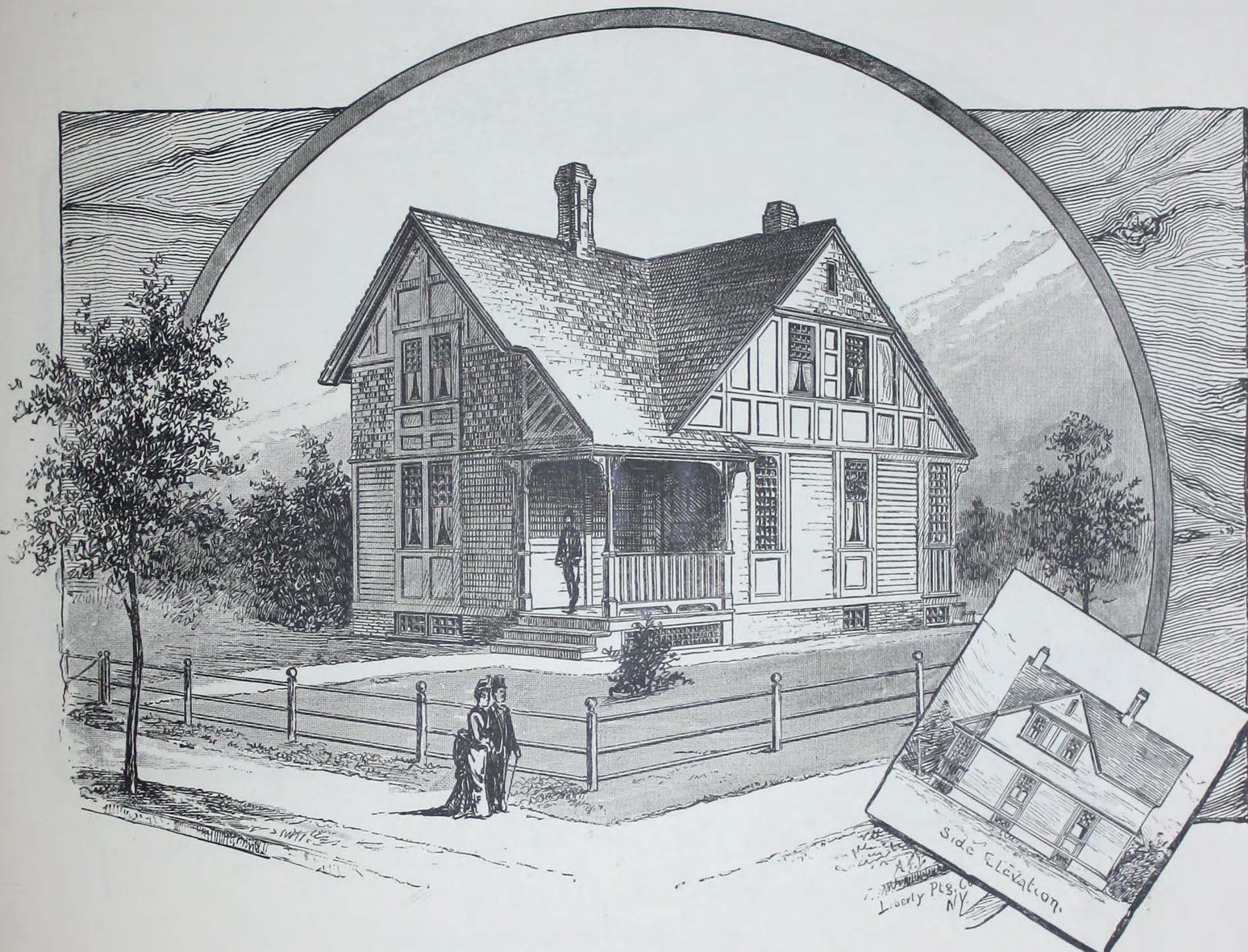
This design can be reversed, enlarged, reduced or altered to suit



FIRST FLOOR. NO. 312



SECOND FLOOR. NO. 312



DESIGN No. 313. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 313

SIZE OF STRUCTURE: Front, 23 ft. Side, 30 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft.; First Story, 9 ft.; Second Story, 8 ft.

MATERIALS: Foundation, wood posts; First Story, clapboards; Second Story, shingles and panelled work; Roof, shingles.

COST: \$800, complete.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—This house, like the preceding design, is intended for construction in the manner described on page 169.

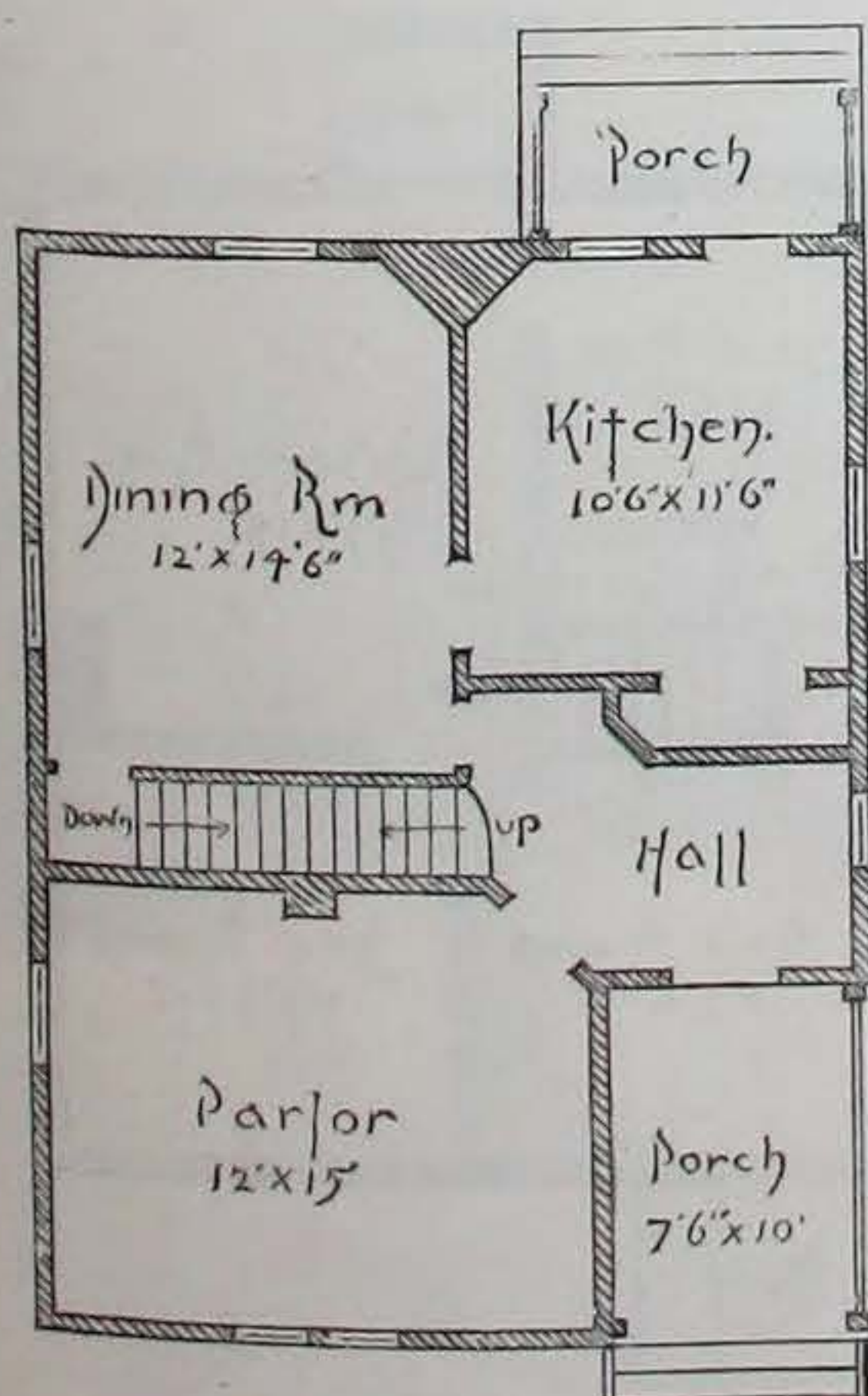
There is a cellar 10 x 10 ft., with a stairway to the same from the dining-room.

There are four gables. This, and design Number 312, make good sea or lake side cottages; they can be so easily and so quickly constructed. They are warm enough for winter occupancy. Well built, they are suitable for the coldest climate.

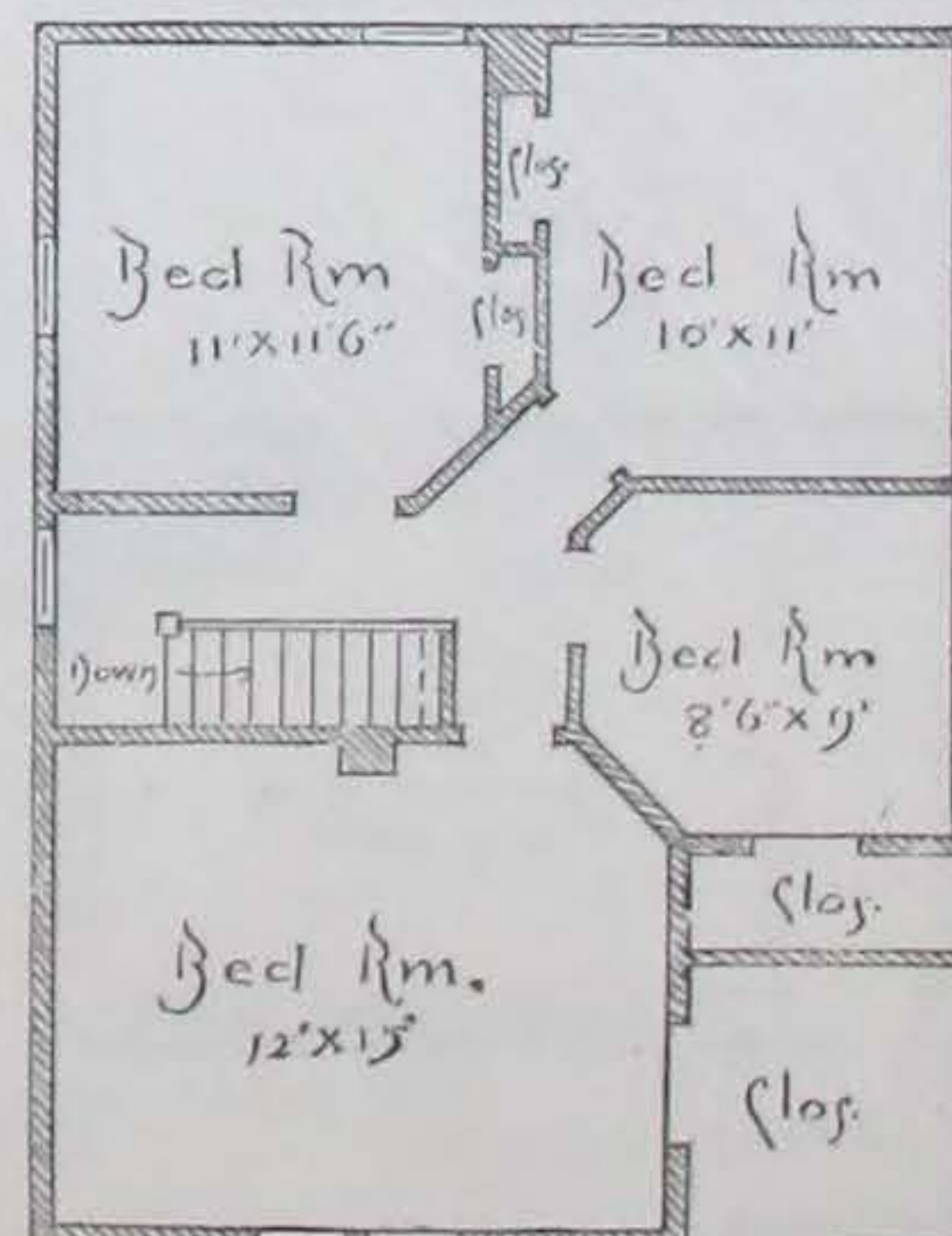
Brick foundations with a cellar under one half the house would cost about \$200 additional.

Built with the ordinary frame this house would cost about \$1,200.

We take the greatest interest in the construction specified for these houses, because it opens up new possibilities for that large class—men of moderate means. When an ample and substantial house can be built for a few hundred dollars, thousands of new house owners should be the result, and that means just so many better and more provident citizens.



FIRST FLOOR. NO. 313



SECOND FLOOR. NO. 313



DESIGN No. 314. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 314

SIZE OF STRUCTURE: Front, 24 ft. Side, 28 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Basement, 7 ft., 6 in.; First Story, 8 ft.

MATERIALS: Foundation, stone; First Story, walls, shingled; Gables, shingled; Roof, shingled.

COST: \$1,400, complete.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

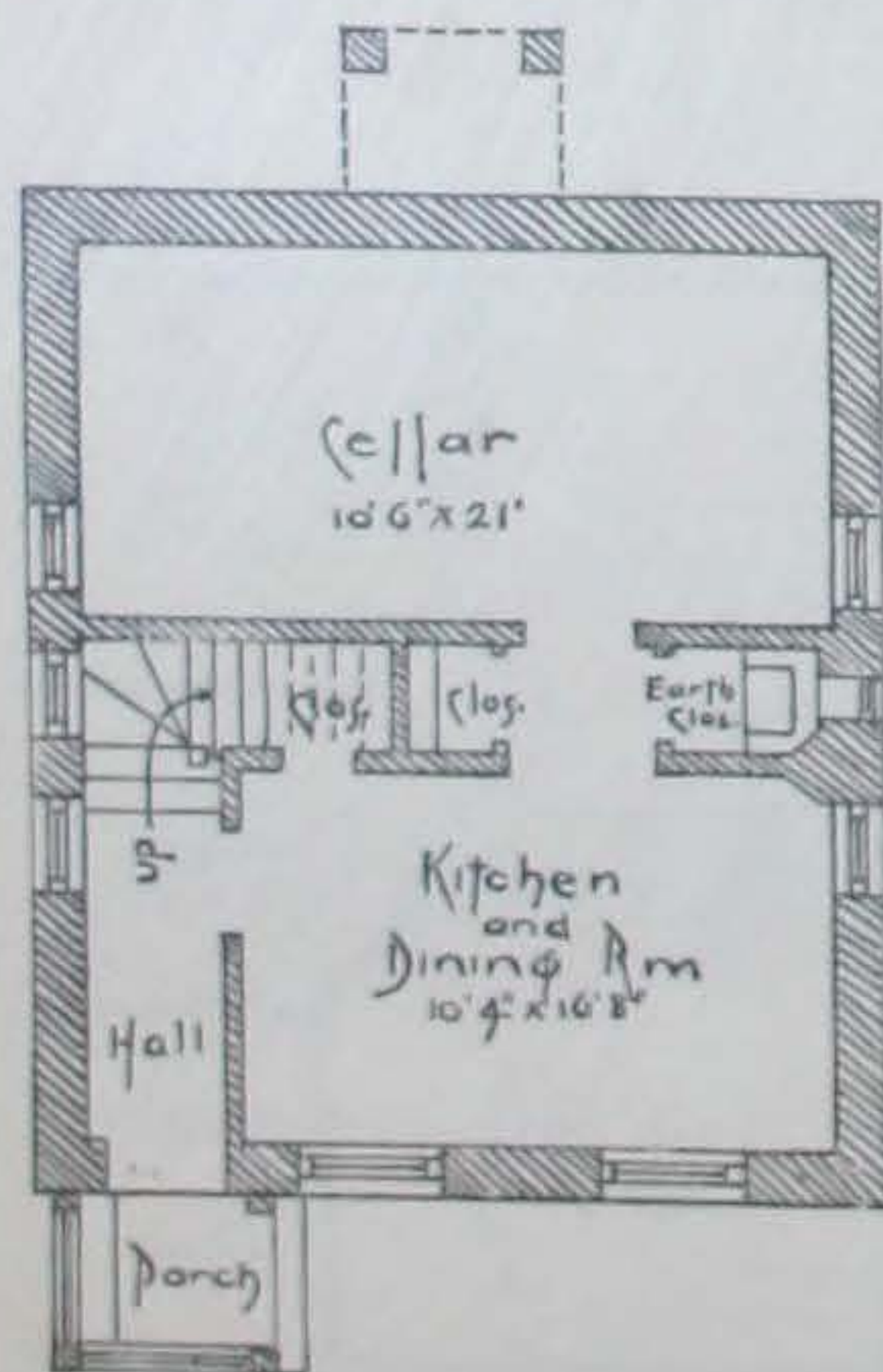
SPECIAL FEATURES.—The kitchen and dining-room (one room) is in the front part of the basement; in the rear part is the cellar. An earth closet is provided in the basement, ventilated by a small window and by a flue carried to the top of the chimney.

On the first floor above the basement is a living room of good size, and three bed-rooms. There is a good attic, floored, but not finished.

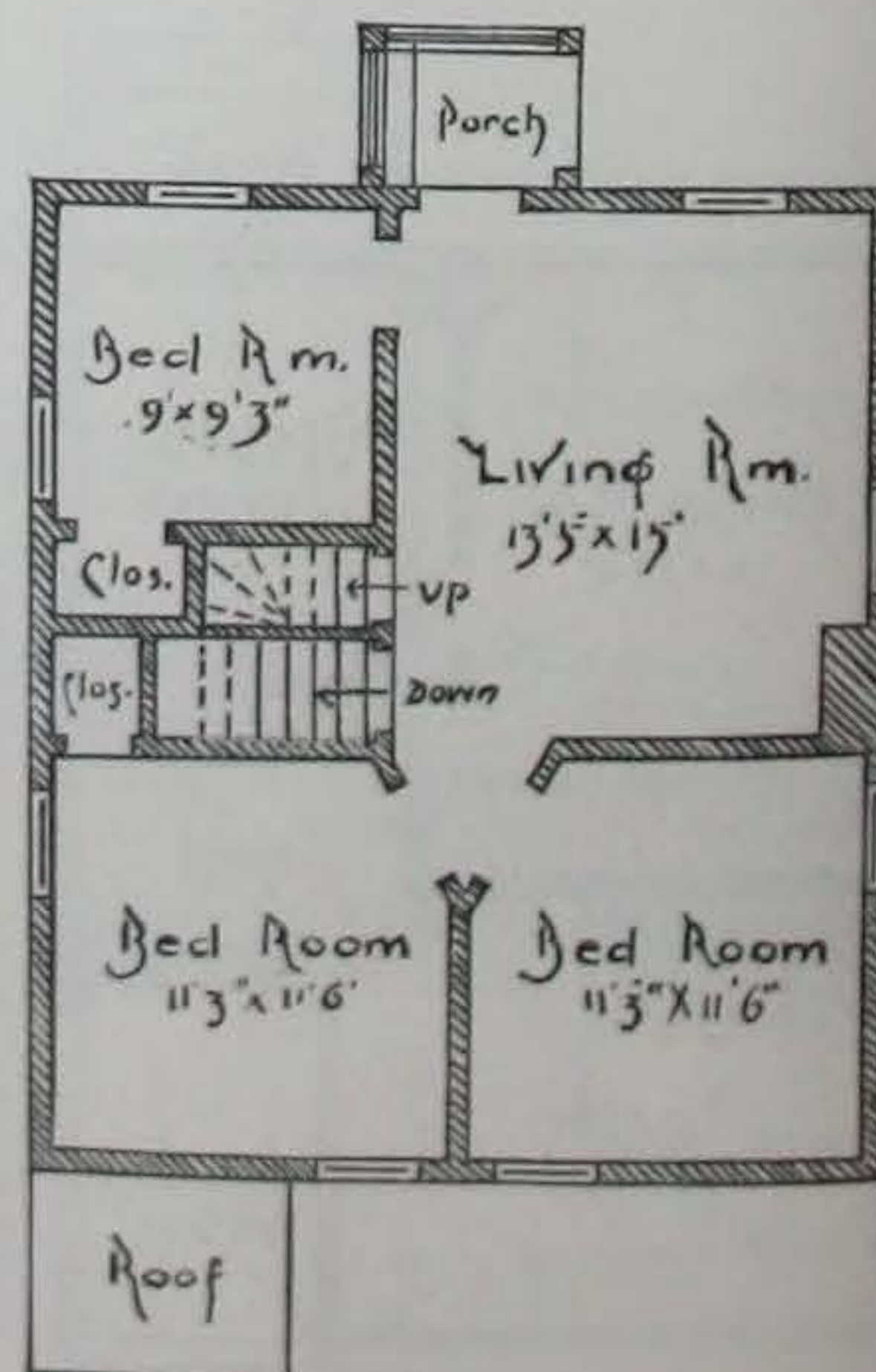
The sharp incline of the ground brings the floor of first story on a level with the ground at the rear, and a rear porch is provided, entering the living room.

There are four gables, the one on the side which is not shown in the view is similar to the one through which the chimney is carried.

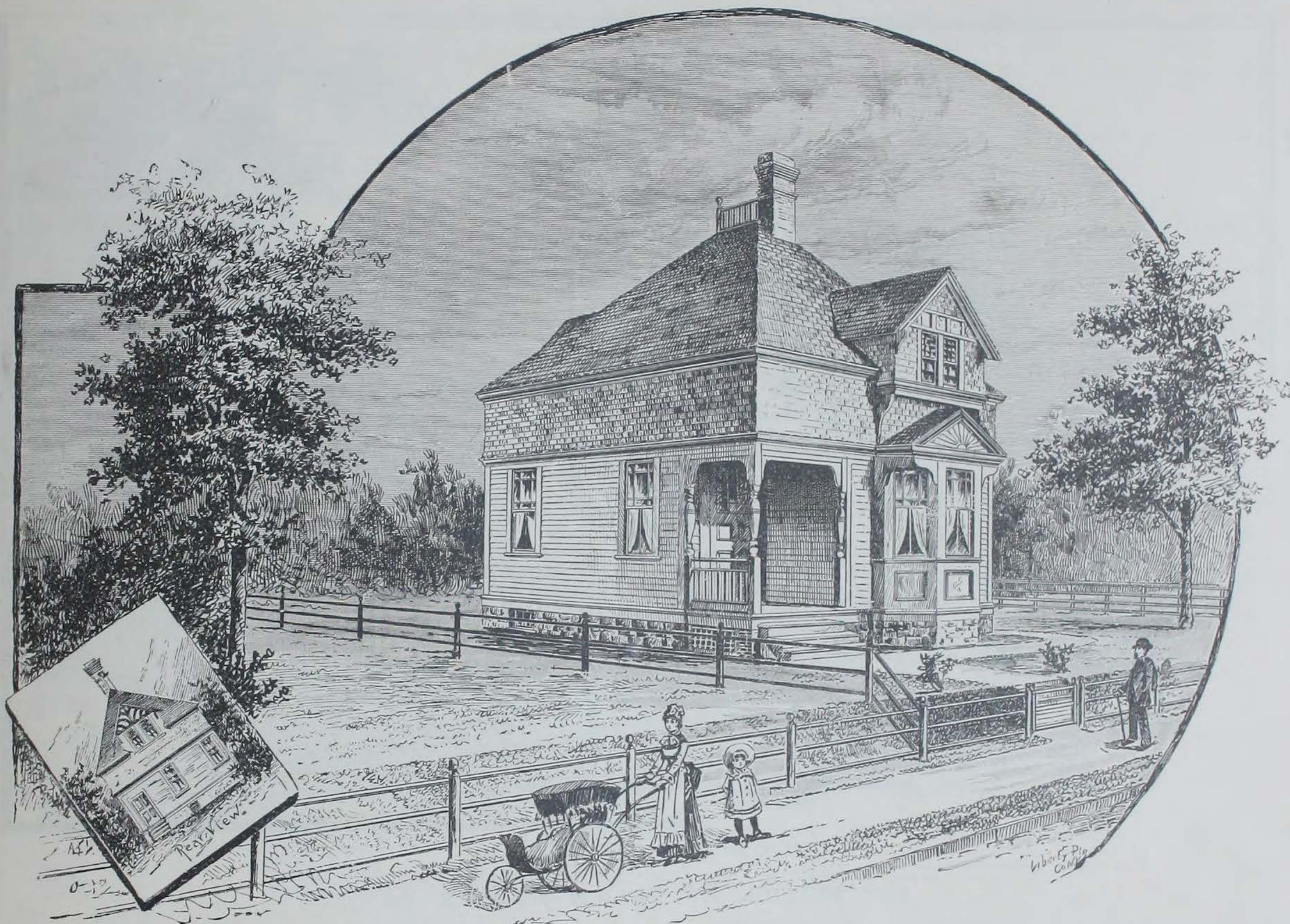
The walls of basement are built of ordinary field stone, random work.



BASEMENT FLOOR. NO. 314



FIRST FLOOR. NO. 314



DESIGN No. 315. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 315

SIZE OF STRUCTURE: Front, 22 ft., 6 in. Side, 26 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Roof, shingles.

COST: \$1,200, complete.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—If the bed-room on first floor can be spared, it is better to use it for a dining-room.

The kitchen stove connects with the parlor chimney by a cement flue carried underneath the stairway.

Three bed-rooms in the second story, with good closets.

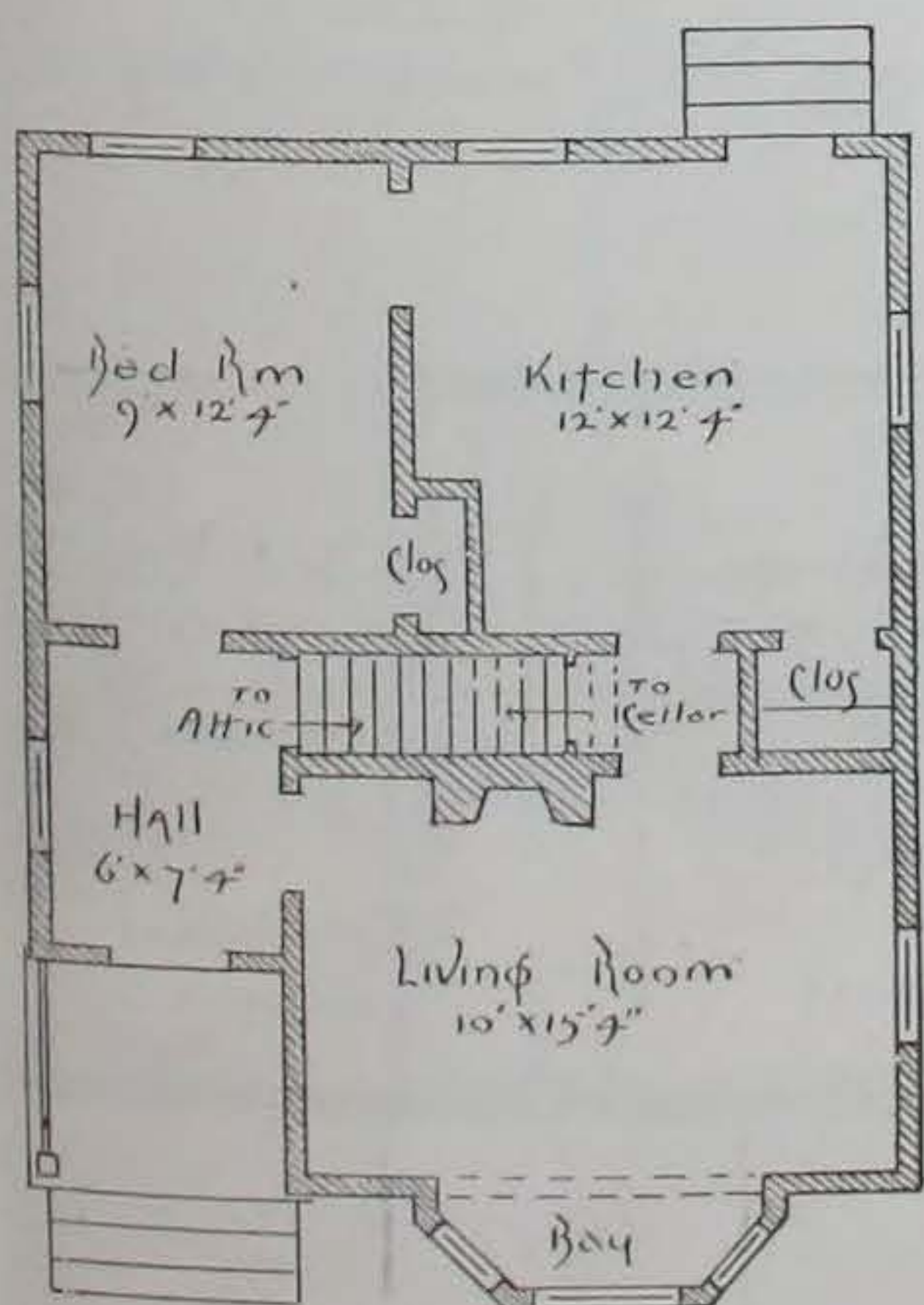
Cellar under the bed-room and kitchen, with stone walls.

NOTES

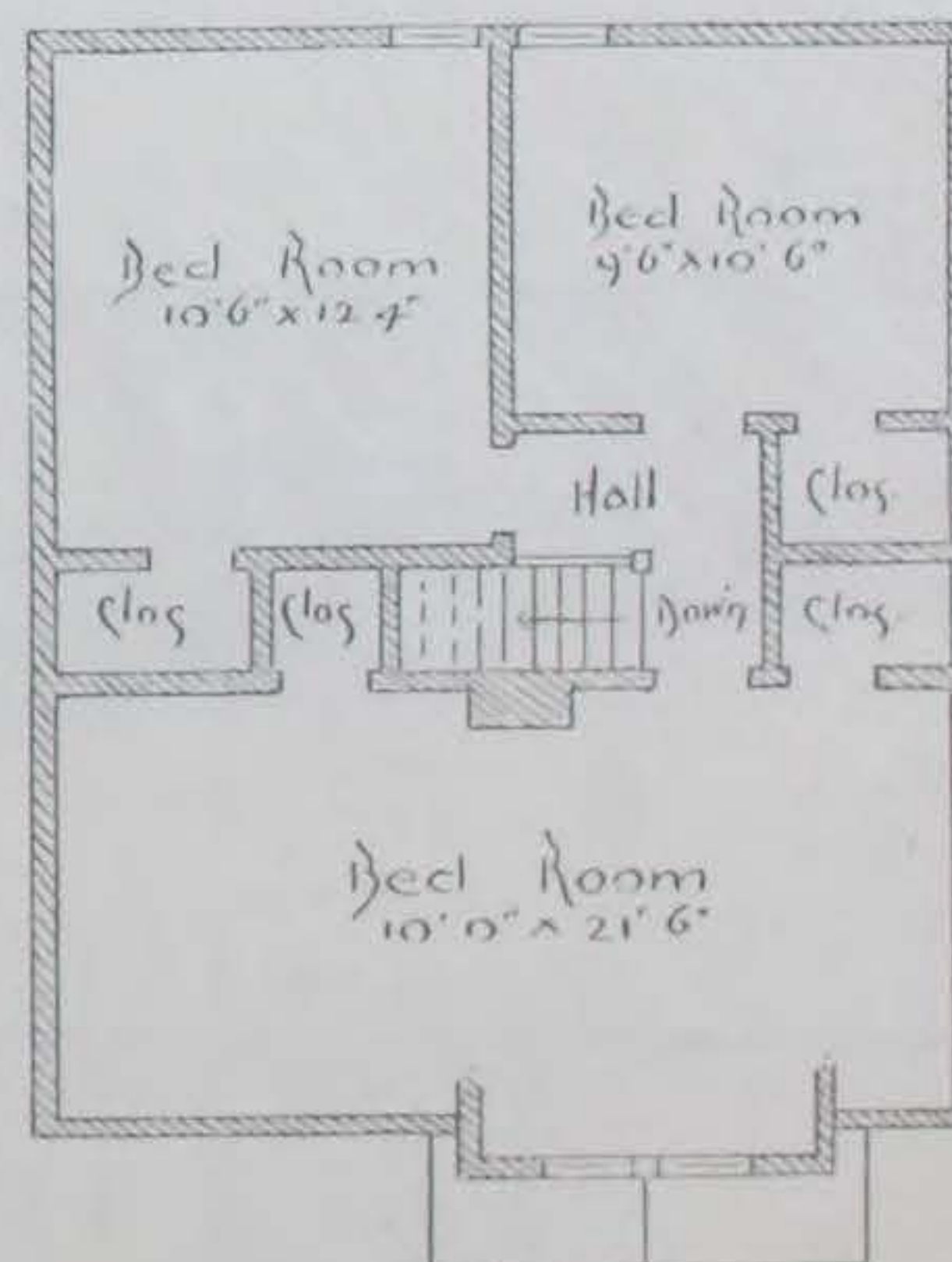
The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

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This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.



FIRST FLOOR. NO. 315



SECOND FLOOR. NO. 315



DESIGN No. 316. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 316

SIZE OF STRUCTURE: Front, 32 ft., 6 in. Side, 21 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft. Second Story, 8 ft.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, clapboards; Roof, shingles.

COST: \$1,150, complete.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

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Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—A compact arrangement of rooms in simple form, affording good accommodations for a family of six or seven.

The parlor or family room is large, and has two closets, and an alcove or bay at the end. It has a chimney breast and flue for a stove, which is connected with the kitchen and dining-room chimney. Where there is a large room for general sitting, as in this design, there is no necessity for the other rooms to be very large.

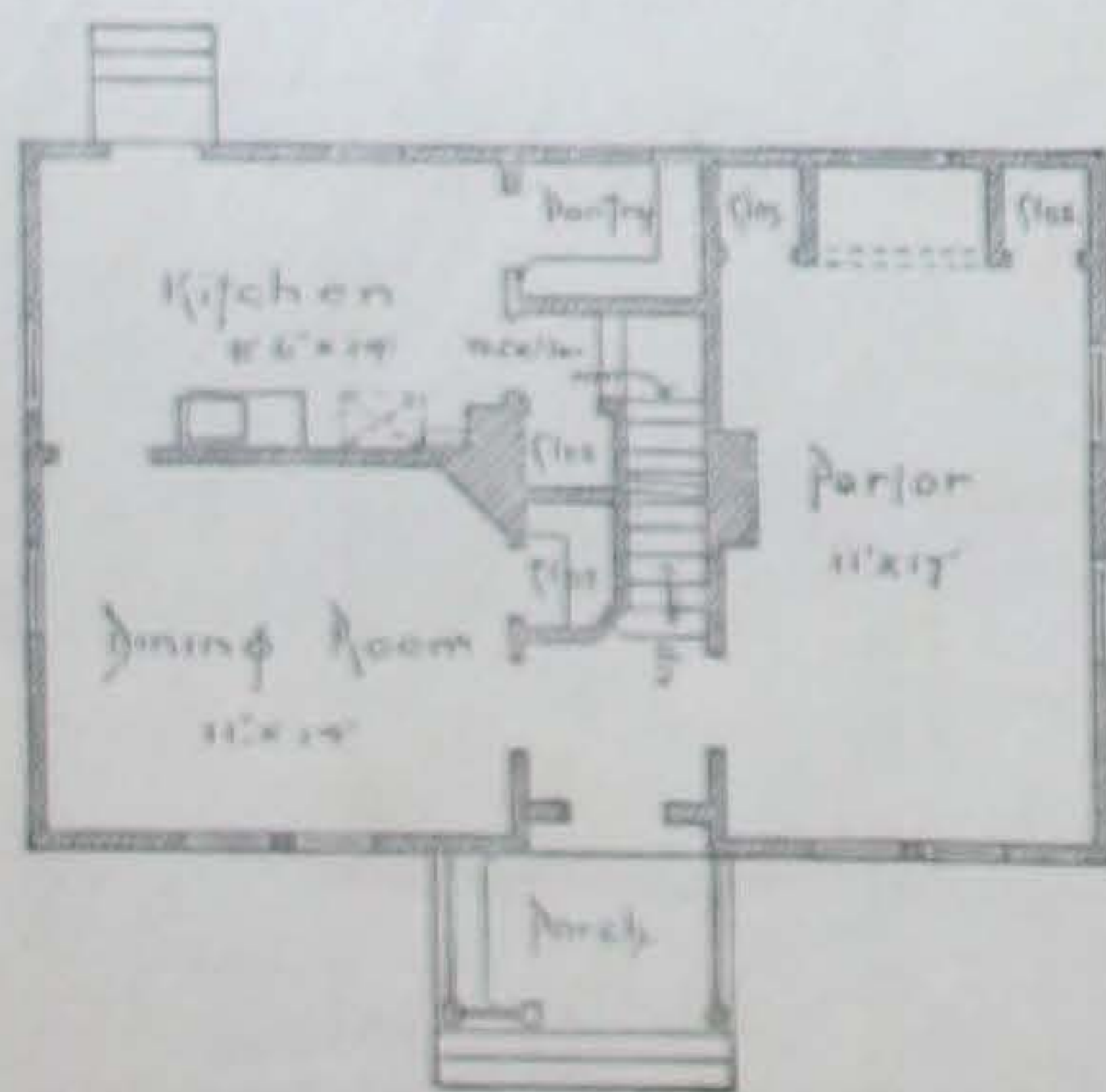
Two bed-rooms of fair sizes on each side of the hall in the second story. Each has a good closet.

Brick wall under the whole house, with cellar under the kitchen, dining-room and hall.

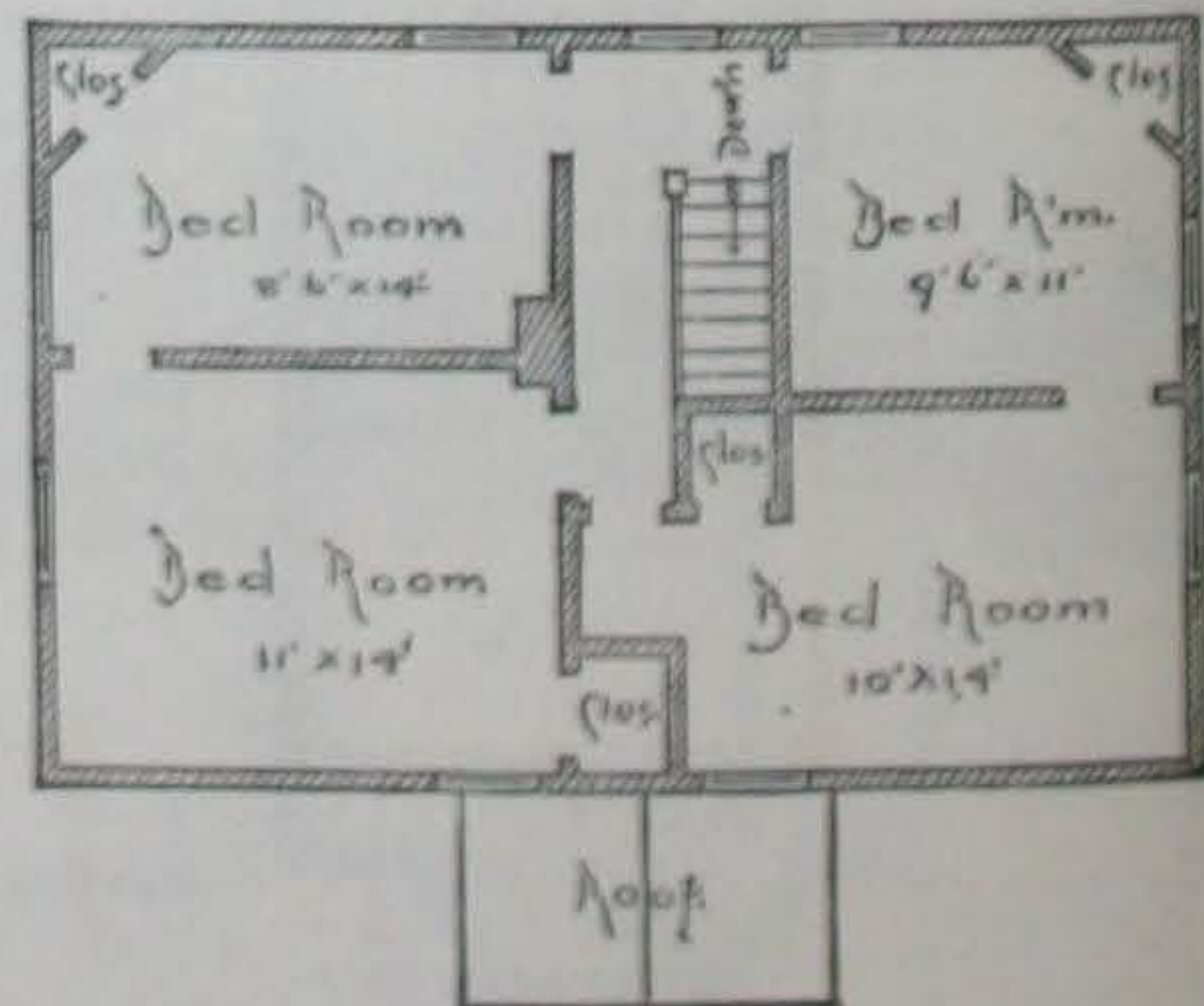
Wood mantels provided for the parlor and the dining-room.

On the first floor plan the dotted square in the kitchen indicates where the stove should be placed.

If the house is built upon a post foundation, without cellar, the cost would be reduced about \$100.



FIRST FLOOR. NO. 316



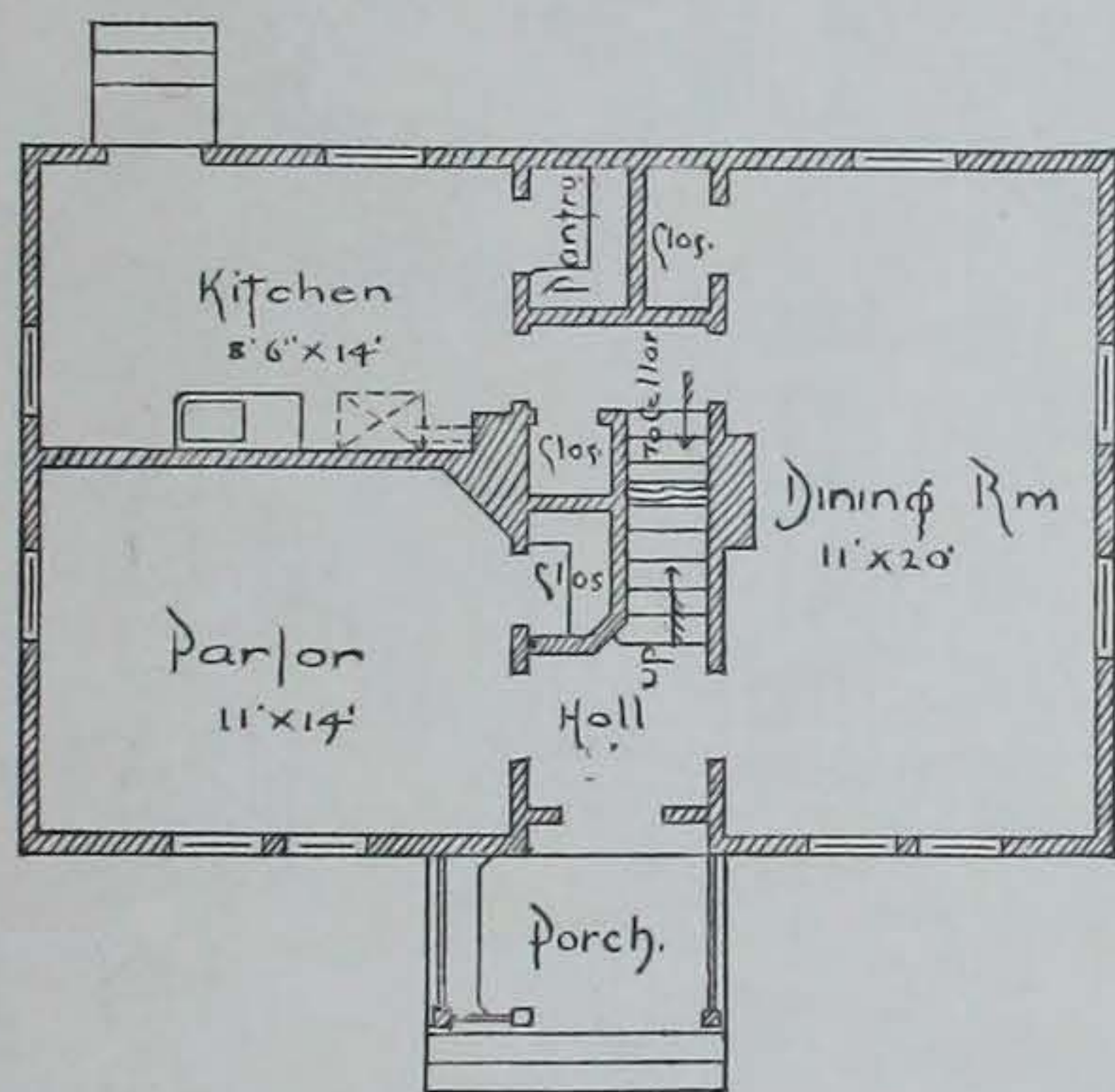
SECOND FLOOR. NO. 316

DESCRIPTION OF DESIGN NUMBER 317

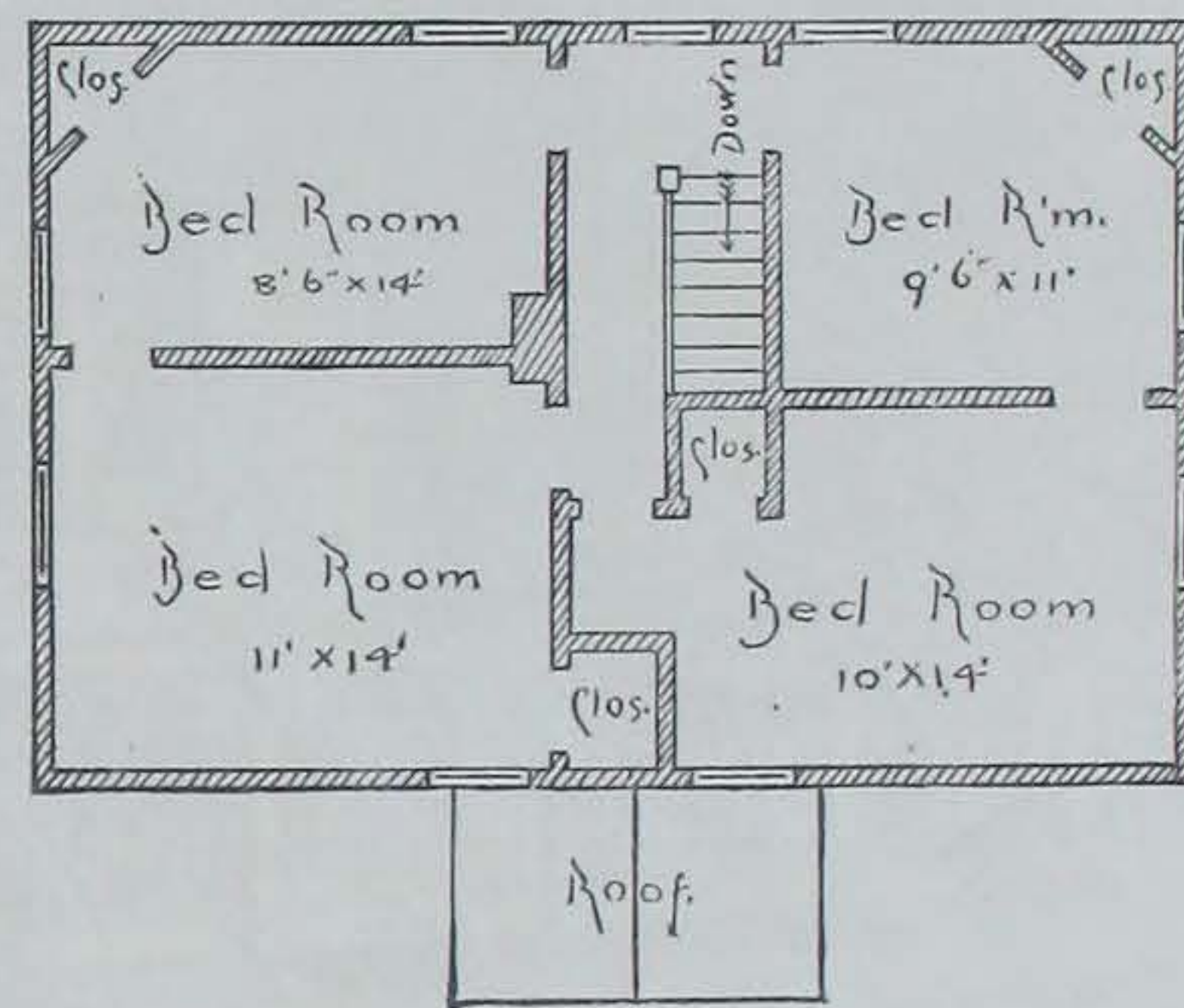
COST : \$1,150, complete.

This is a modification of the preceding design, the exterior appearance being the same. The room called dining-room on the plan of No. 316 is called parlor here; the large room on the right of the hall is made a dining-room and connected with the kitchen. A china-closet is provided.

The ample size of this dining-room makes it large enough for a banquet; it is just right for the hospitable family who keep the latch string always out, and who may be invaded by a troop of friends at any moment.



FIRST FLOOR. NO. 317



SECOND FLOOR. NO. 317

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

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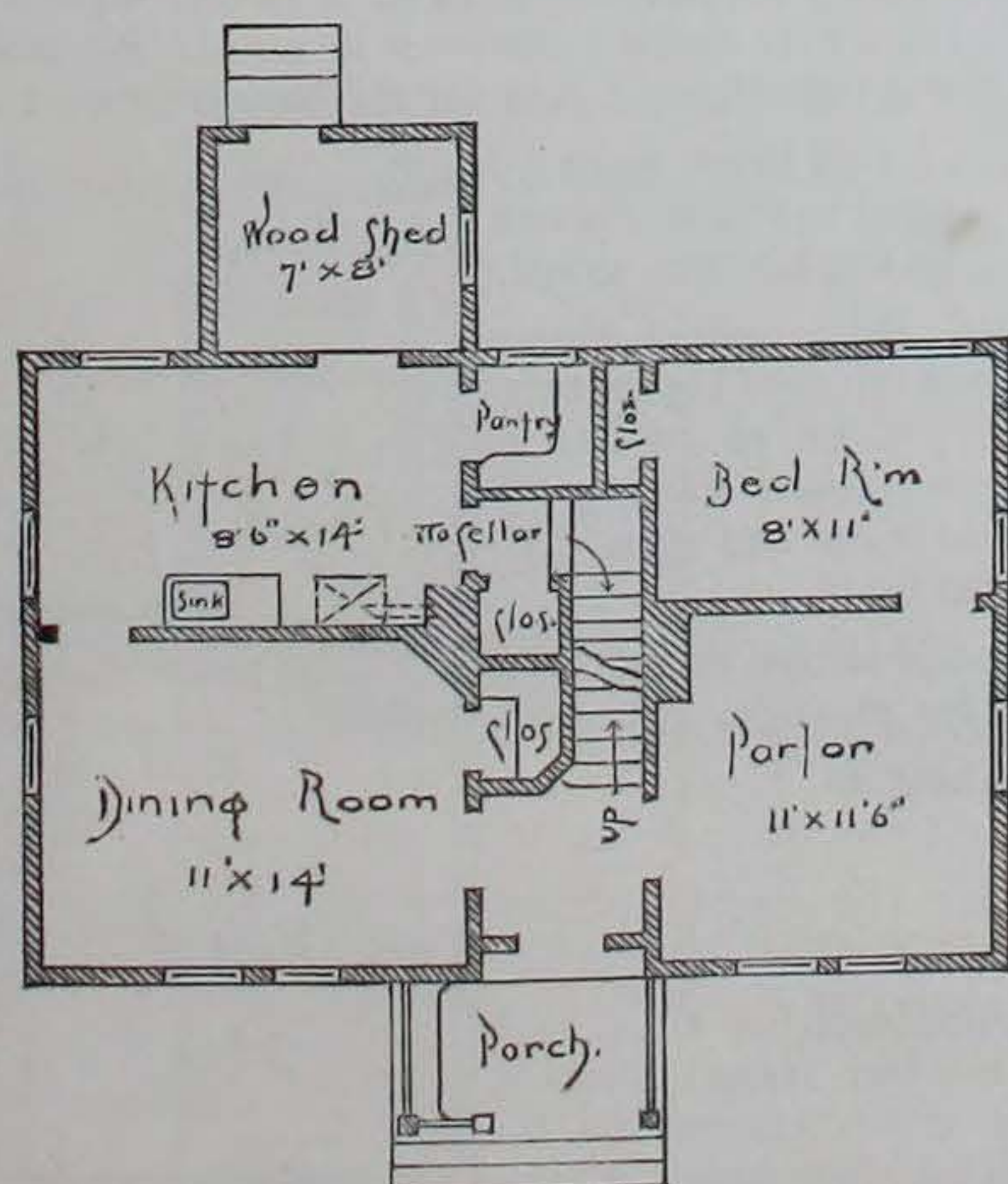
DESCRIPTION OF DESIGN NUMBER 318

COST : \$1,400, complete.

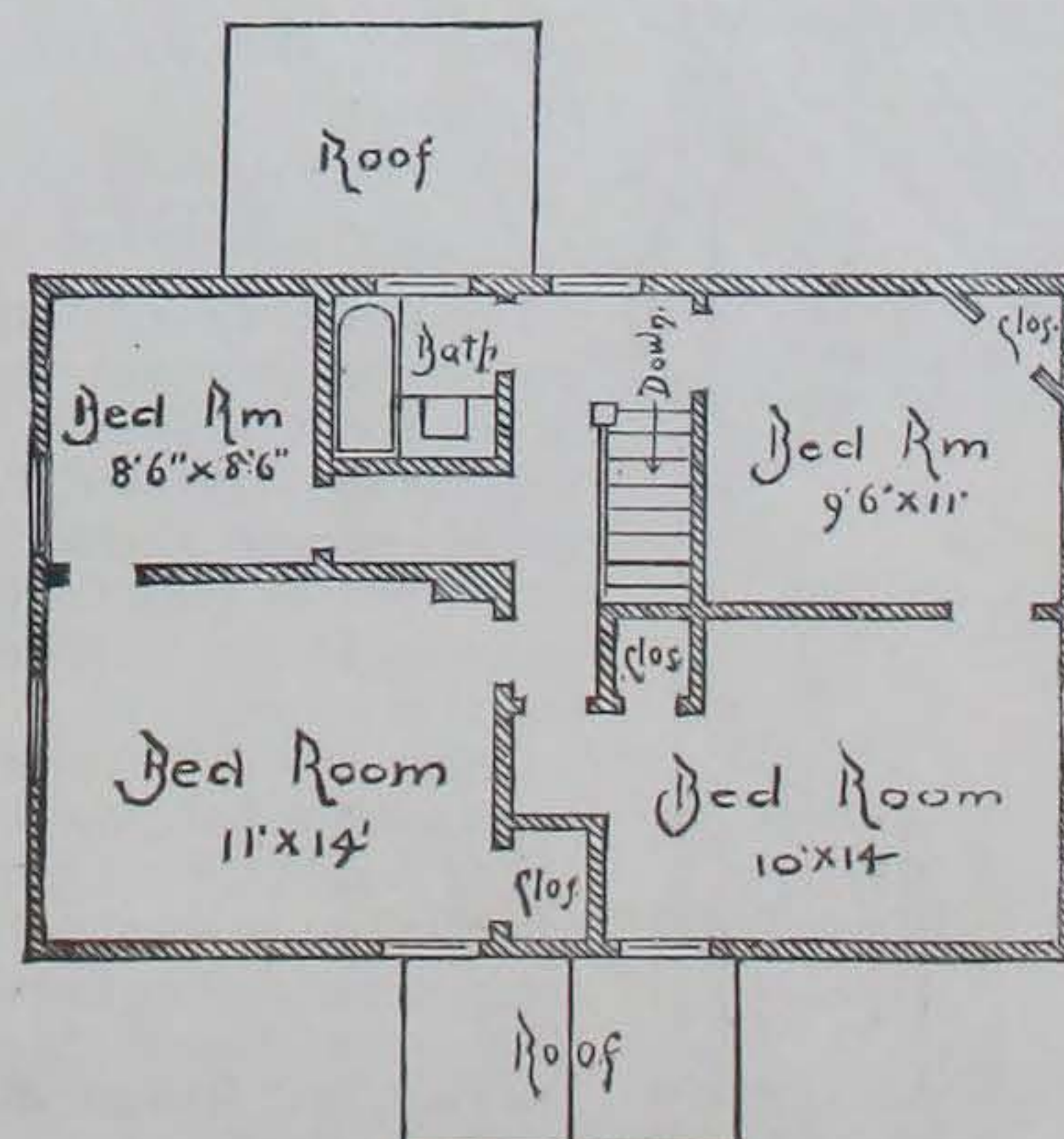
Another modification of Design No. 316, retaining the same general appearance, arrangement and size. A bed-room is made on first story by dividing the space to the right of the hall. A wood shed or summer kitchen is added. (This is not plastered.)

In the second story a bath-room is provided, containing tub and water-closet; a cold water service is carried to the same. A portable range and boiler, costing about \$50 additional, would provide hot water to the bath, as well as to the kitchen sink.

Brick walls under the house. Cellar under the kitchen, dining-room and hall.



FIRST FLOOR. NO. 318



SECOND FLOOR. NO. 318

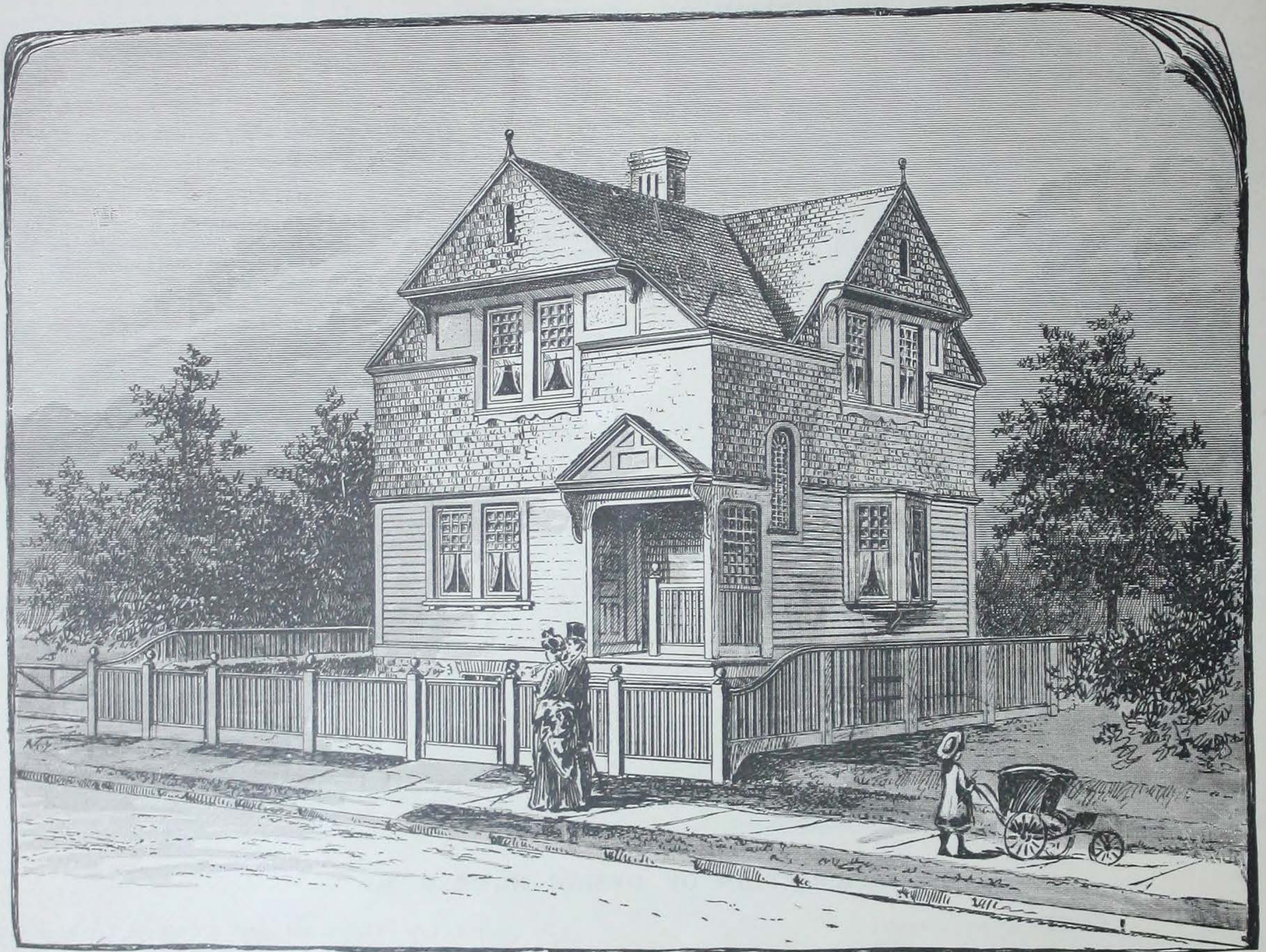
NOTES

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.



DESIGN No. 319. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 319

SIZE OF STRUCTURE: Front, 20 ft. Side, 30 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles; Roof, shingles.

COST: \$1,000, complete.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

SPECIAL FEATURES.—Particularly adapted for a narrow city or village lot. Can be built on a lot 25 ft. wide, and leave a passage to the rear of 3 ft. wide.

There is an entrance porch 5 x 7 ft., overhung by the second story, from which the parlor or family-room is entered. The stairway to the second story starts from this room.

The dining-room is of good size, and has a small bay window with a window seat. In the winter time this window seat would make a capital place for setting pots of flowers, where they would get the sunlight. For some locations it would be well to reverse the plan to bring the dining-room on the south or east side.

The kitchen has a large pantry. The sink is placed in a recess so as not to impose on the kitchen space.

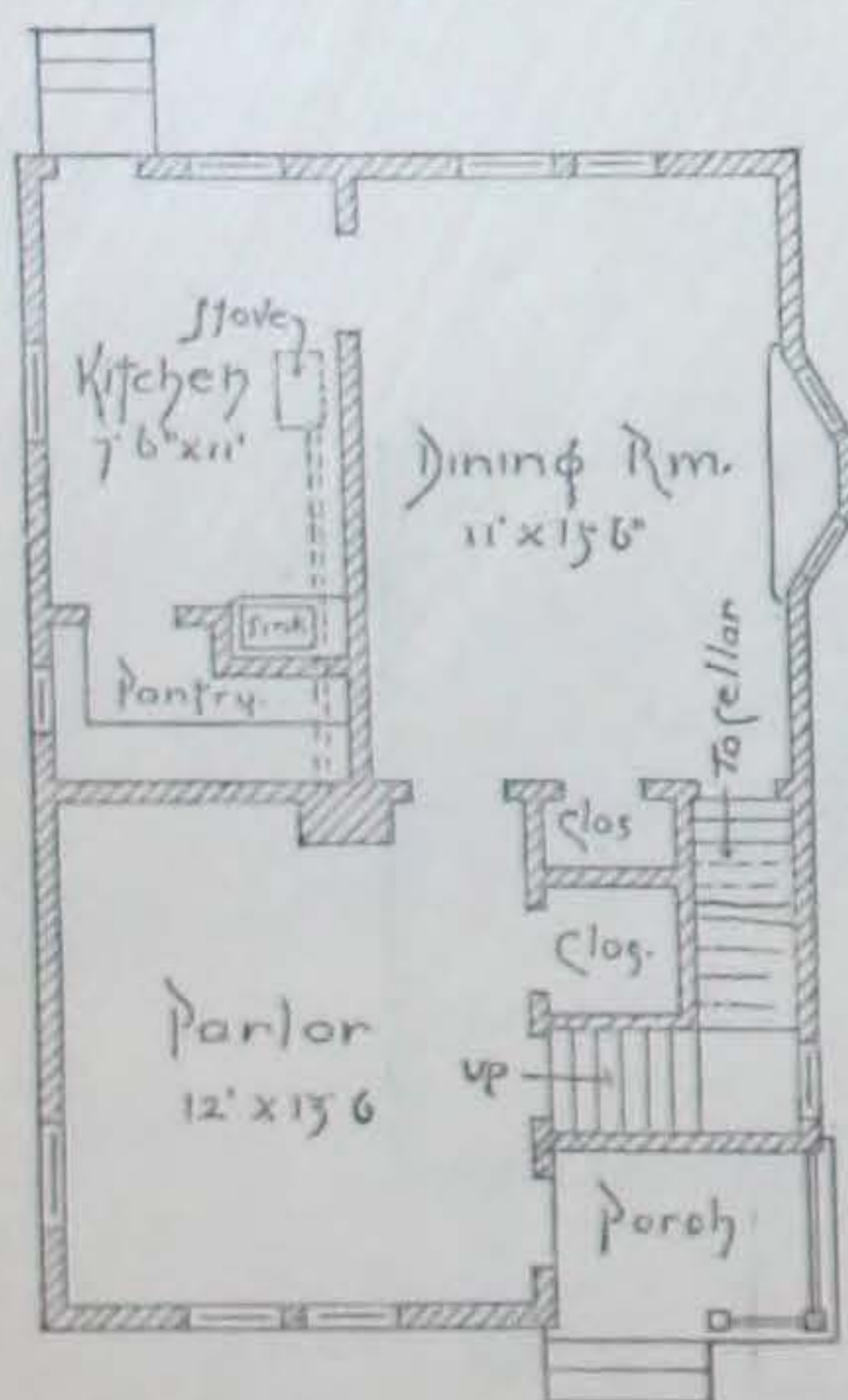
The second story gives three good bed-rooms entered separately from the hall; each room has a closet, the front room having an additional one over the stairway, 3 ft. above the floor.

There is space above the second story ceiling for storage.

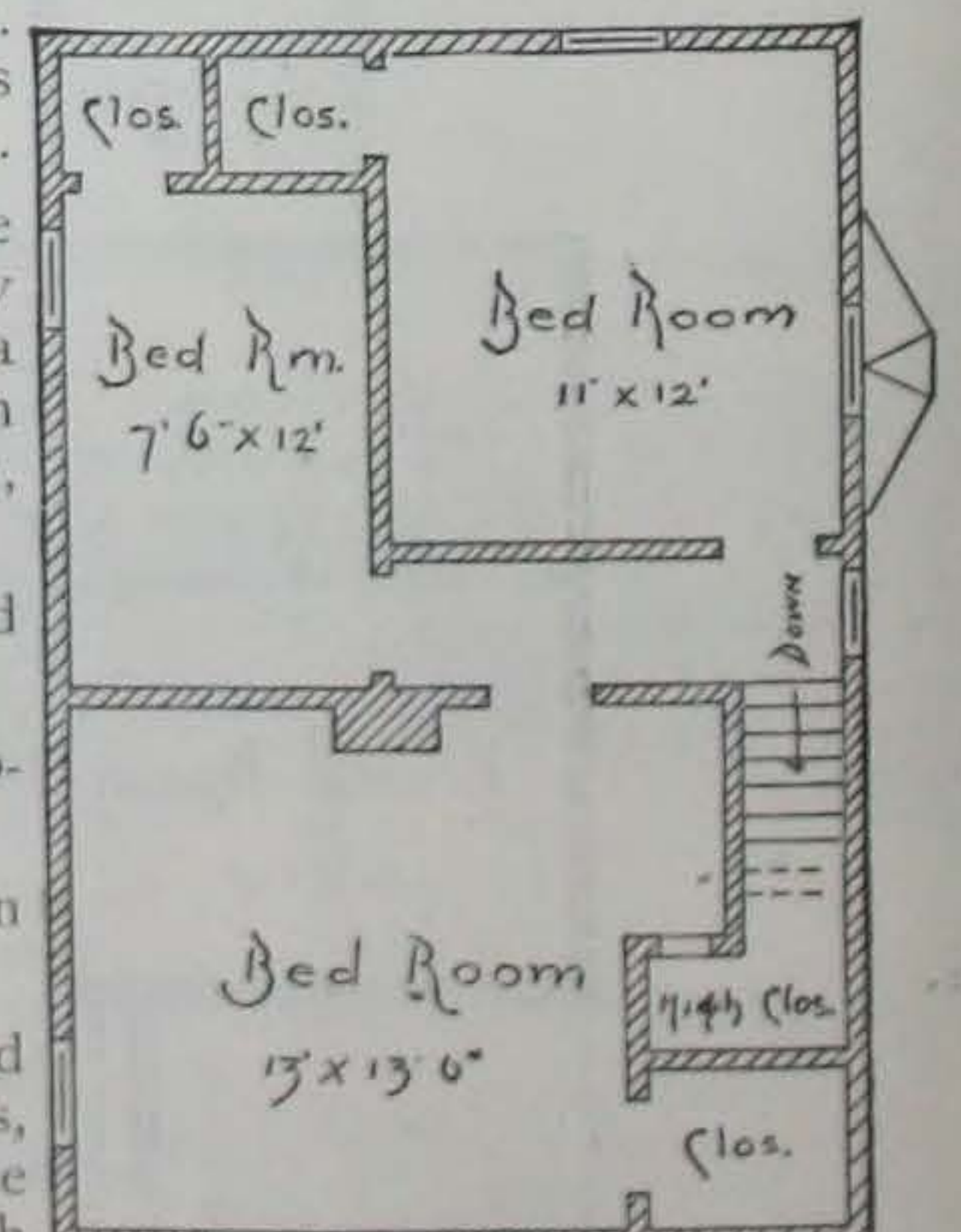
The chimney is centrally located, and contains three flues.

Cellar under the front portion of the house.

Our specifications for this, and in fact for all our frame houses, call for the entire frame to be covered with building paper, which insures a warm house.



FIRST FLOOR. NO. 319



SECOND FLOOR. NO. 319

DESCRIPTION OF DESIGN NUMBER 320

COST : \$1,000, complete.

The general appearance and size of this house are the same as the preceding design. Instead, however, of entering directly into the parlor, there is an entrance hall and an open stairway of very pretty design. This arrangement does away with some closet room, but will be preferred by some.

By many, this kitchen will be regarded as too small. We have found that when there is a large pantry, as here, and a dining-room of good size, a large kitchen is not necessary. A small kitchen,—(of course it must be large enough to move about in conveniently)—saves steps and work. In many city "flats" of much pretension, and for which a high rental is paid, the kitchens are not as large as in this little house; yet the tenants find that they are sufficient.

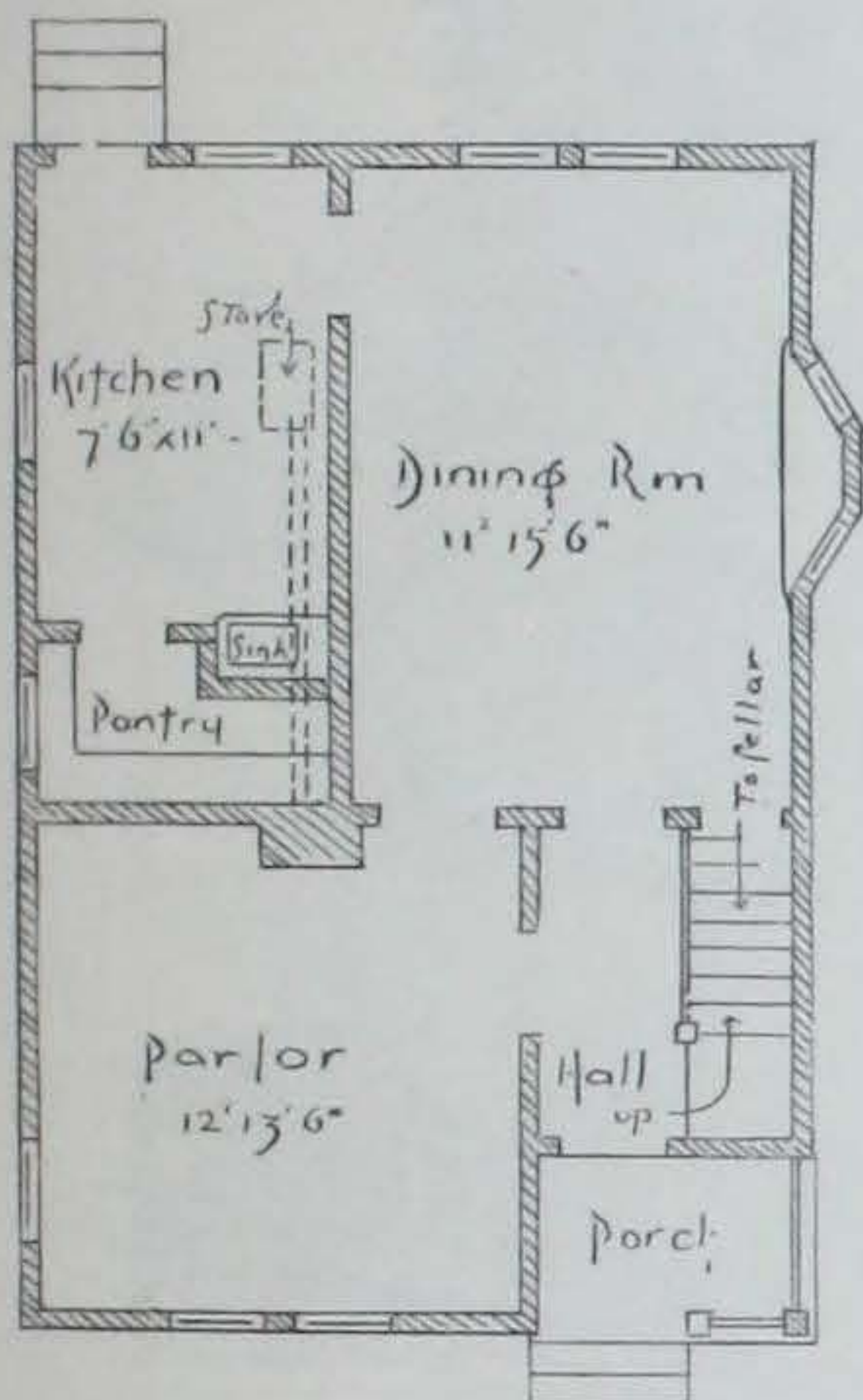
[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

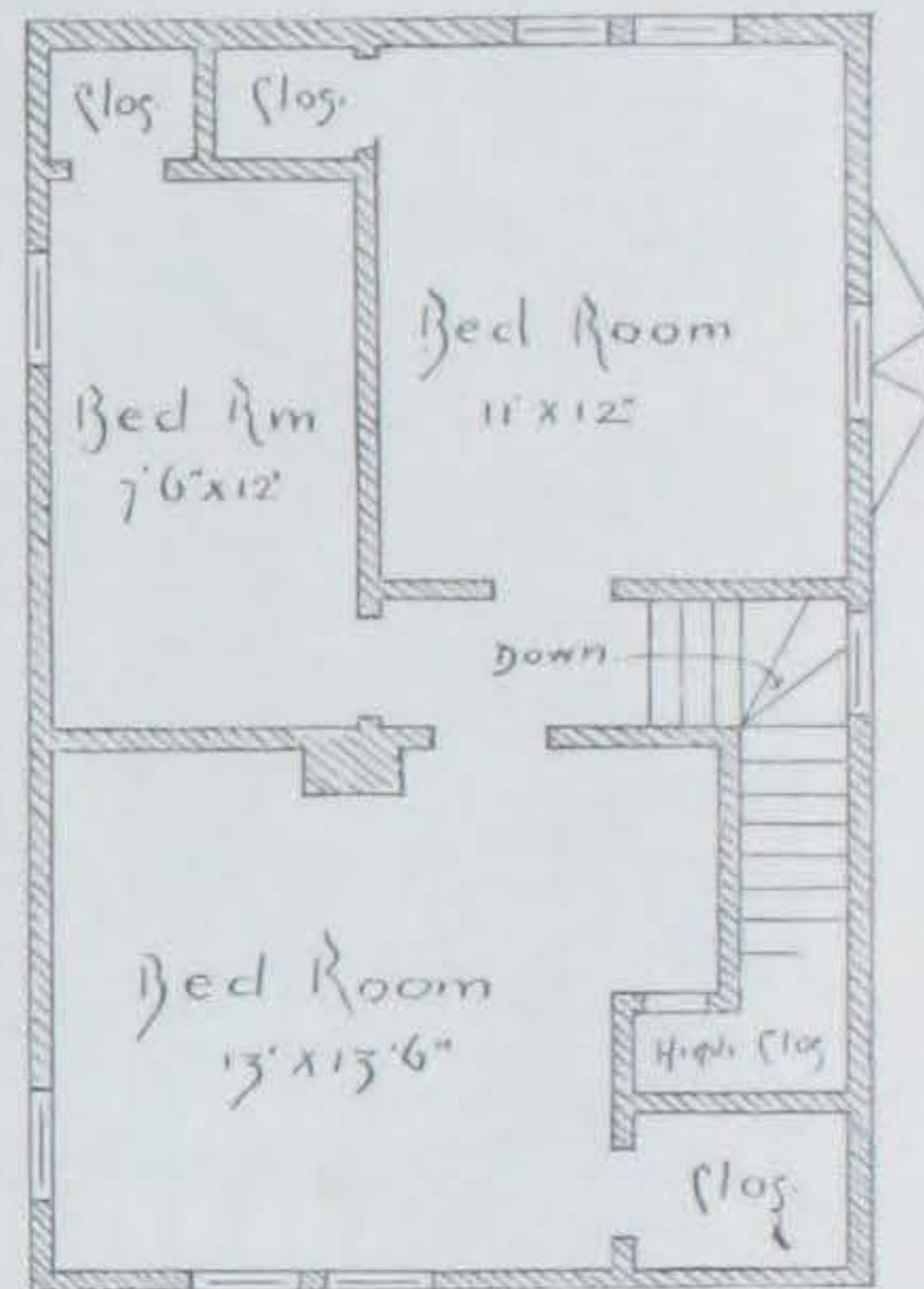
The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.



FIRST FLOOR. NO. 320



SECOND FLOOR. NO. 320

DESCRIPTION OF DESIGN NUMBER 321

COST : \$1,200, complete.

Size of house, general appearance and arrangement are same as design No. 319. A kitchen extension 10 ft. by 16 ft. is added, giving a sitting or sewing-room or bed-room on first floor.

Cellar under the front portion of the house.

In this house, if a large dining-room is preferred in place of the two rooms shown on plans, the partition between sitting-room and dining-room can be done away with, making one room 15 ft. 6 in. by 19 ft.

If the building were set on posts and the cellar omitted it could be built for \$100 less than the estimate given above.

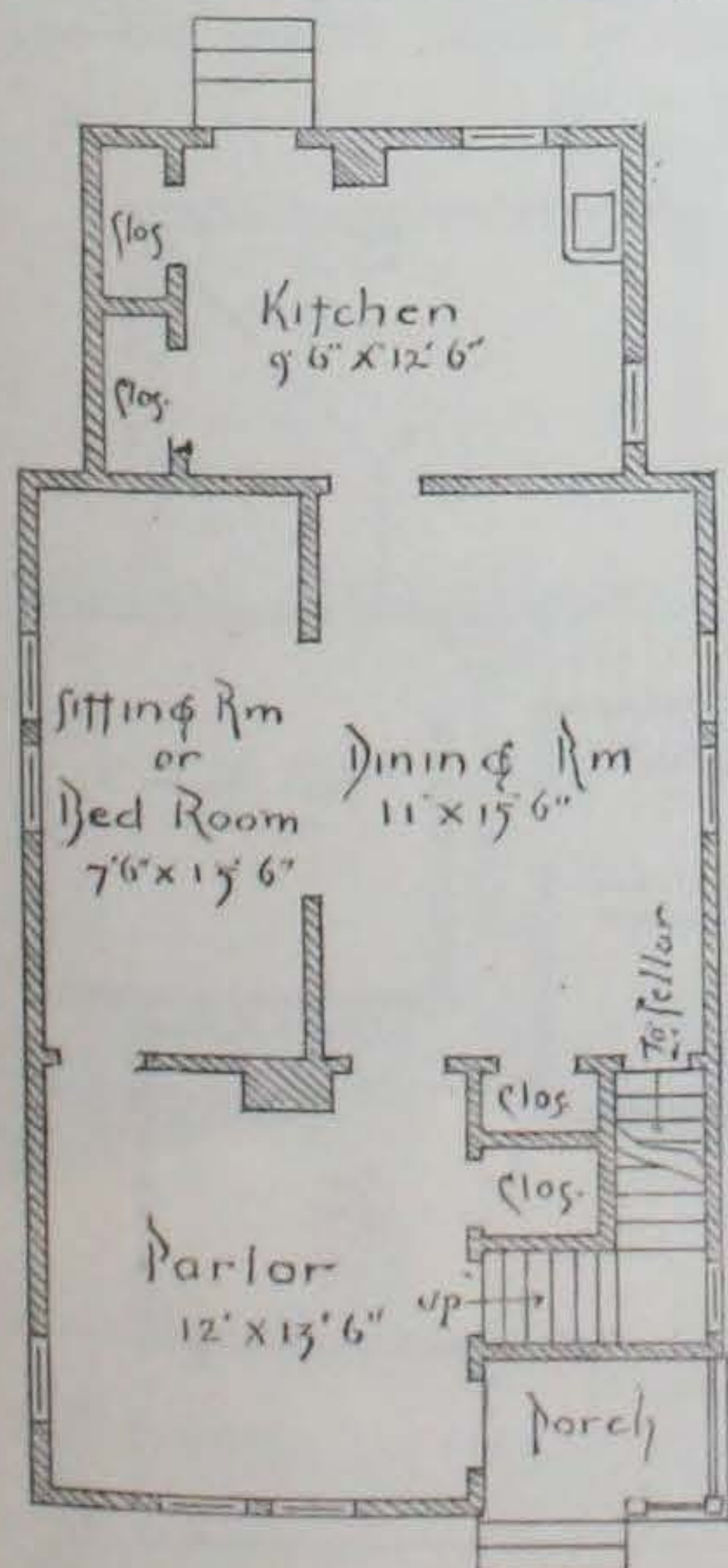
[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

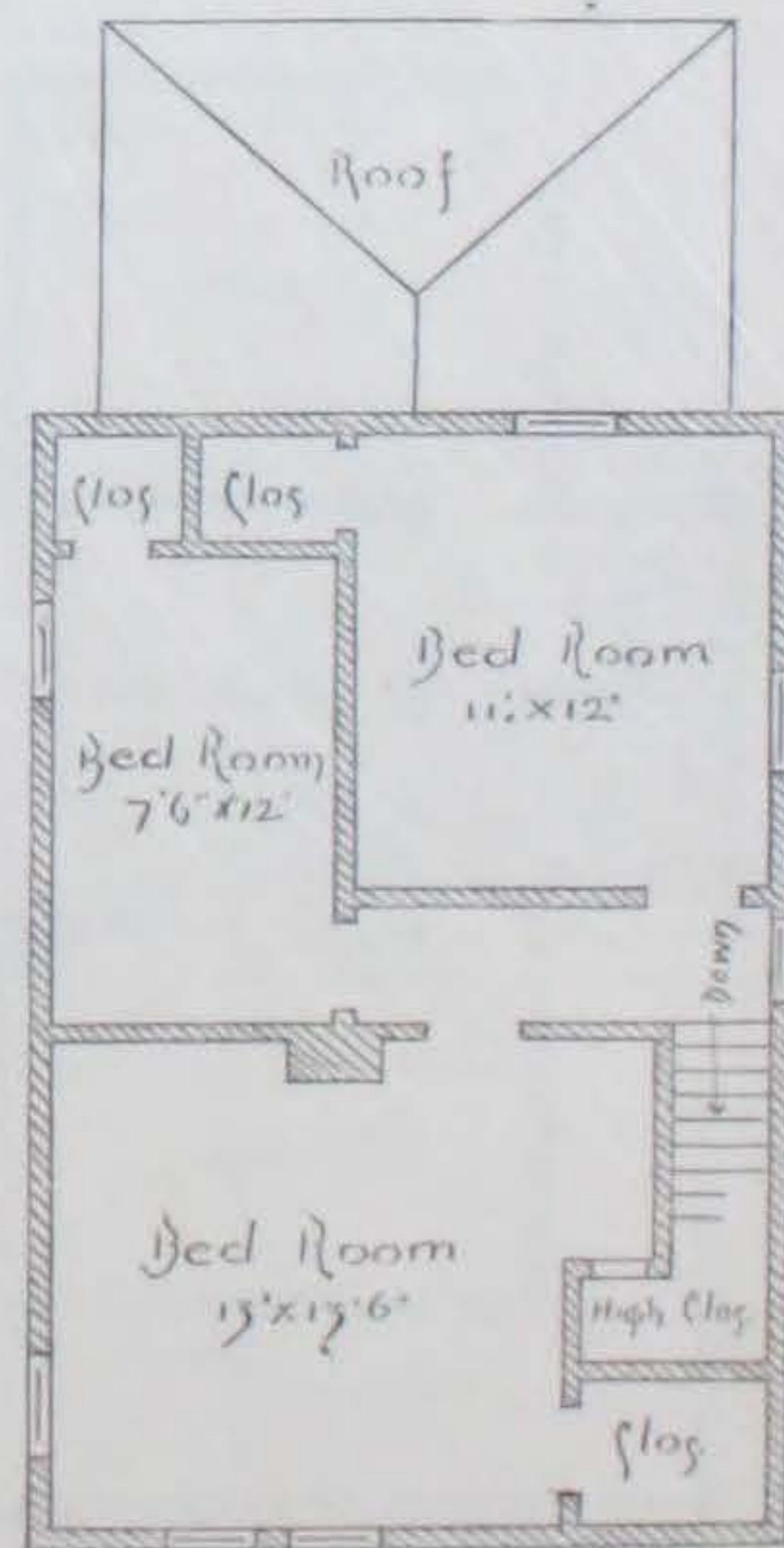
The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

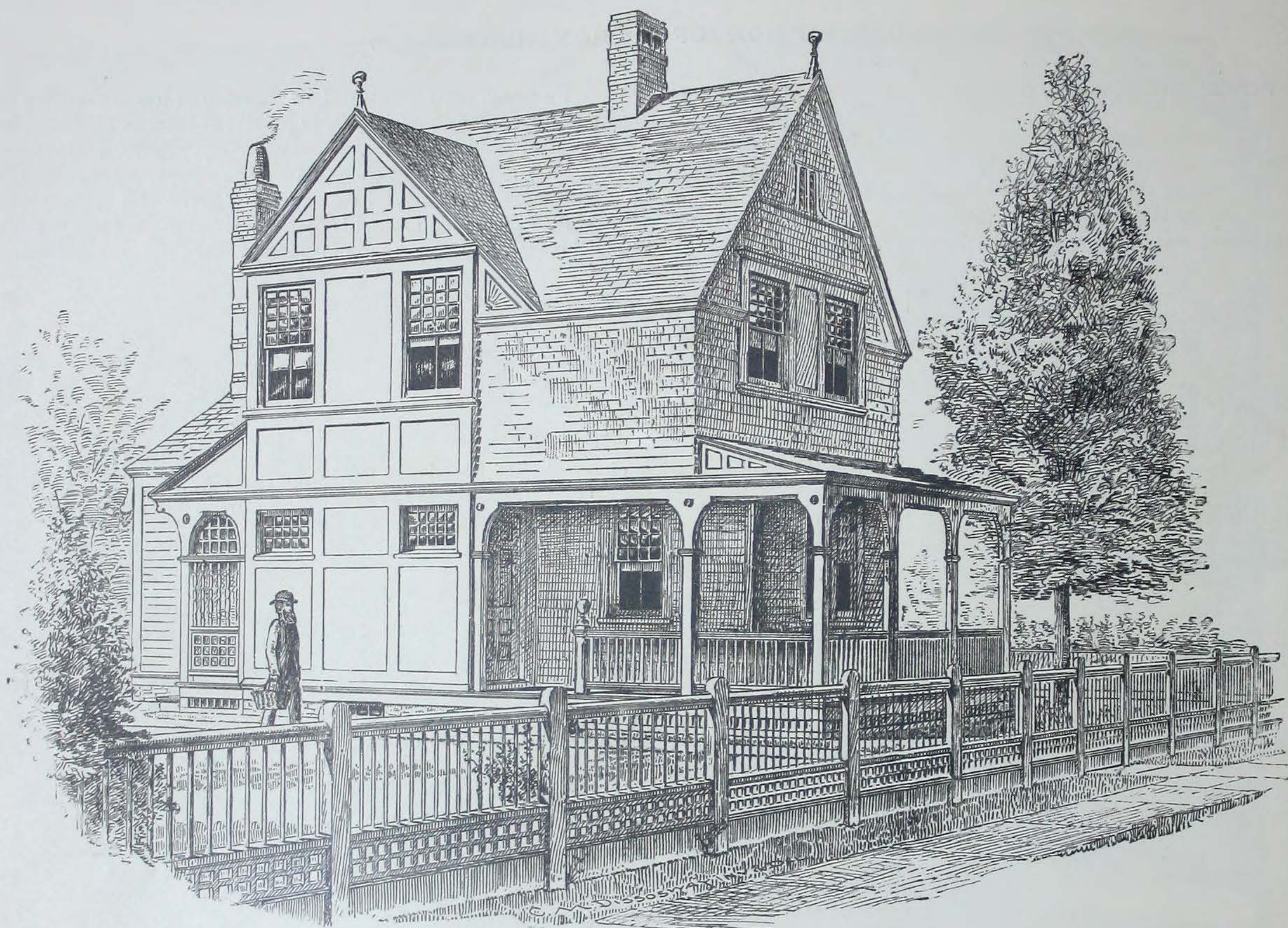
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.



FIRST FLOOR. NO. 321



SECOND FLOOR. NO. 321



DESIGN No. 322. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 322

SIZE OF STRUCTURE: Front, 21 ft., 6 in., extreme width, 25 ft.
Side, 24 ft., 9 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 8 ft., 6 in.; Second Story, 8 ft., 6 in.

MATERIALS: Foundation, stone; First Story, clapboards, Second Story, shingles; Roof shingles.

COST: \$1,500, complete.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern

houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—A compact arrangement of rooms.

Ample piazza.

All the rooms are of good size.

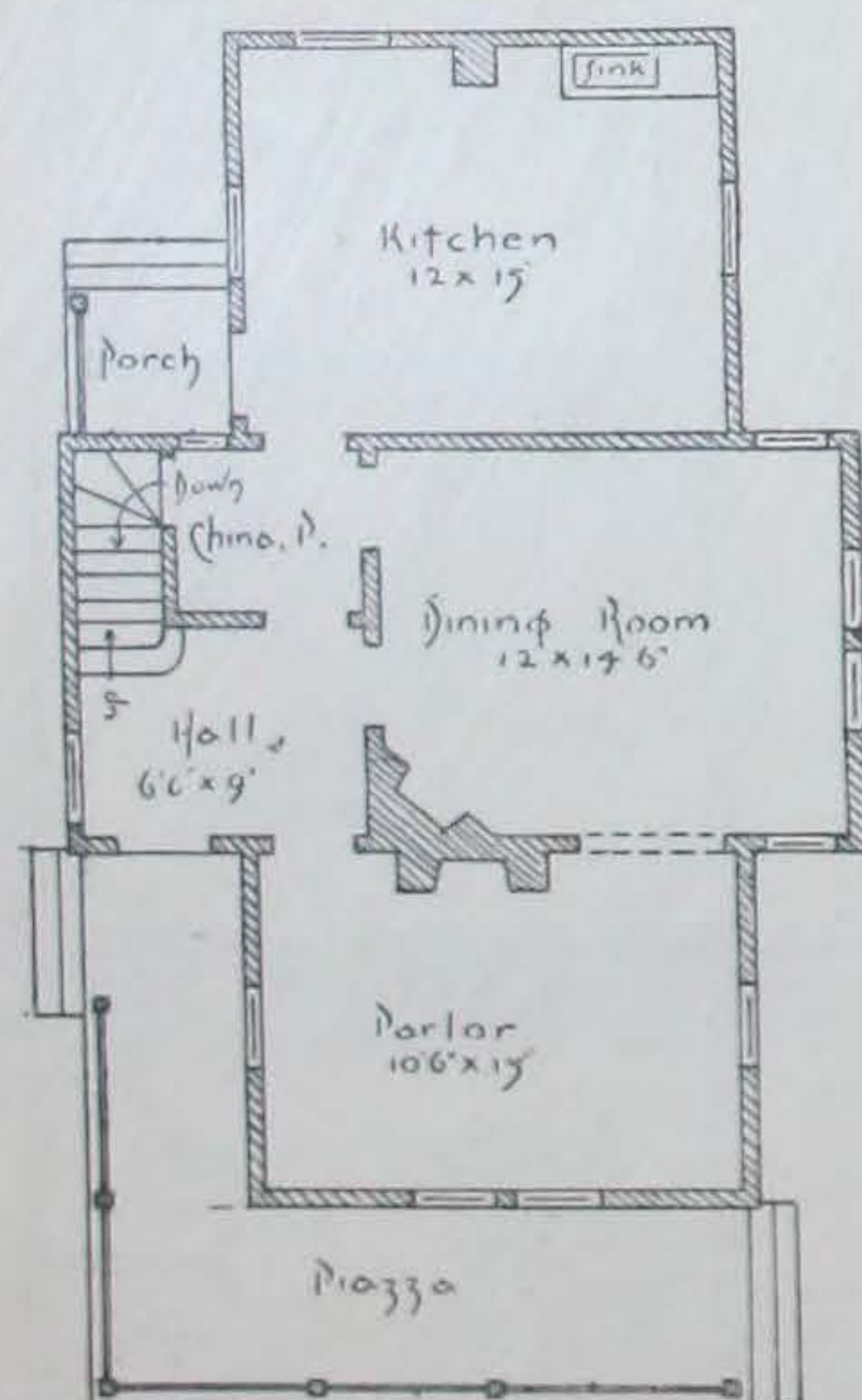
The parlor and dining-room connected by a large opening, where a curtain should hang.

Fire-place in parlor and dining-room, with pretty wood mantels of appropriate design.

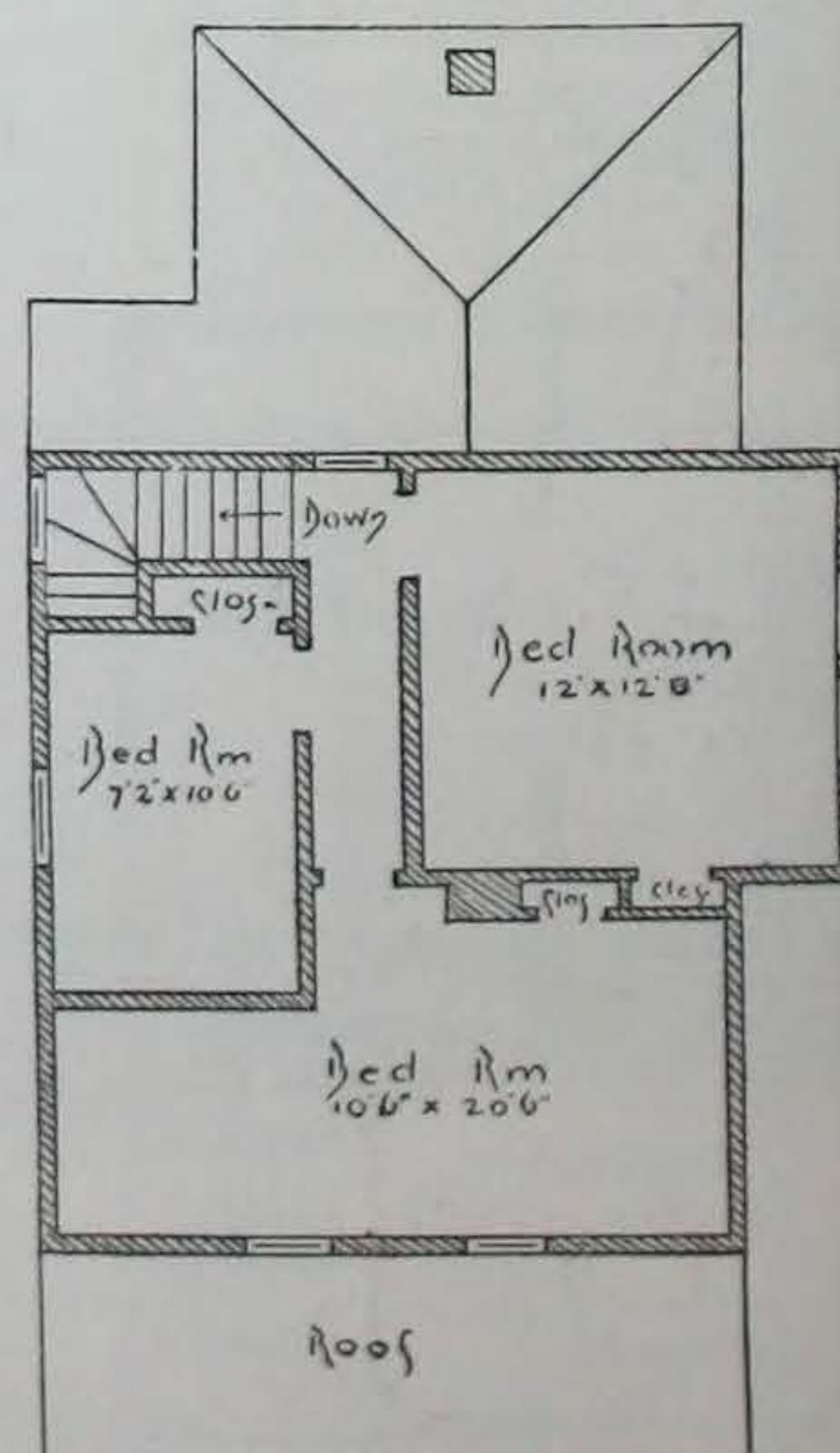
Three good rooms in the second story.

Cellar under the hall and dining-room.

An excellent design for a seaside, lakeside or mountain cottage; the arrangement of rooms and the large window and door openings insure a good circulation of air.



FIRST FLOOR. NO. 322



SECOND FLOOR. NO. 322



DESIGN No. 323. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 323

SIZE OF STRUCTURE: Front, 32 ft. Side, 44 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$1,700, complete.

our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Plenty of rooms and most of them good size.

An excellent seaside house by adding more veranda.

Brick walls under the whole house with cellar under the dining-room. Large cellars are not necessary in these days; with a wall under the house it is just as warm, dry and healthful as if the whole were excavated. Large cellars are costly if they are well built. An illy-built one is of little use and a positive source of danger. Of course there are certain kinds and conditions of soil which make it desirable to excavate under the whole house, but ordinarily where there is a good dry top soil a large excavation is neither necessary nor desirable.

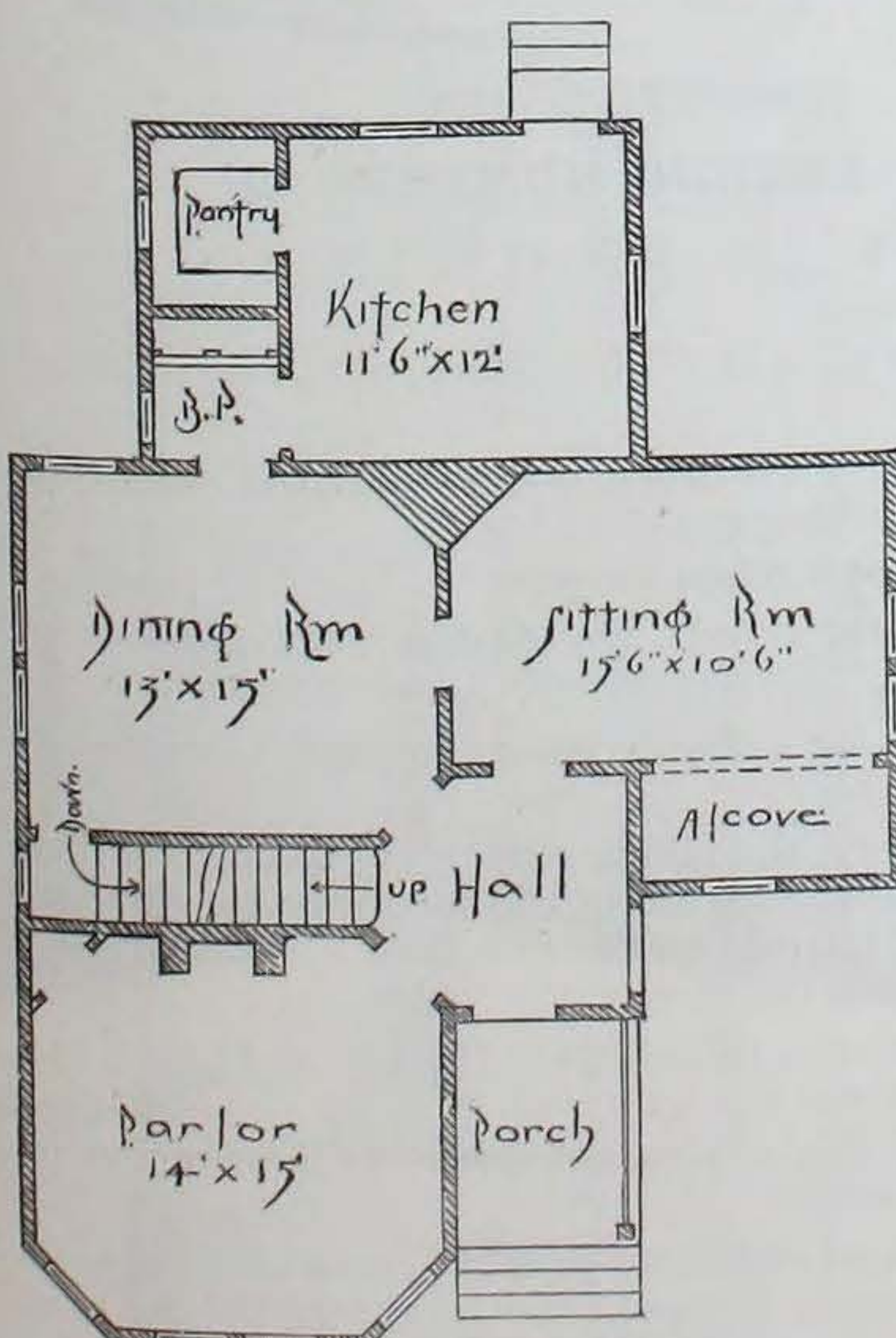
There are four bedrooms on second floor. The smaller one in the rear can be made a bath-room, with tub and water-closet for an additional \$200.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

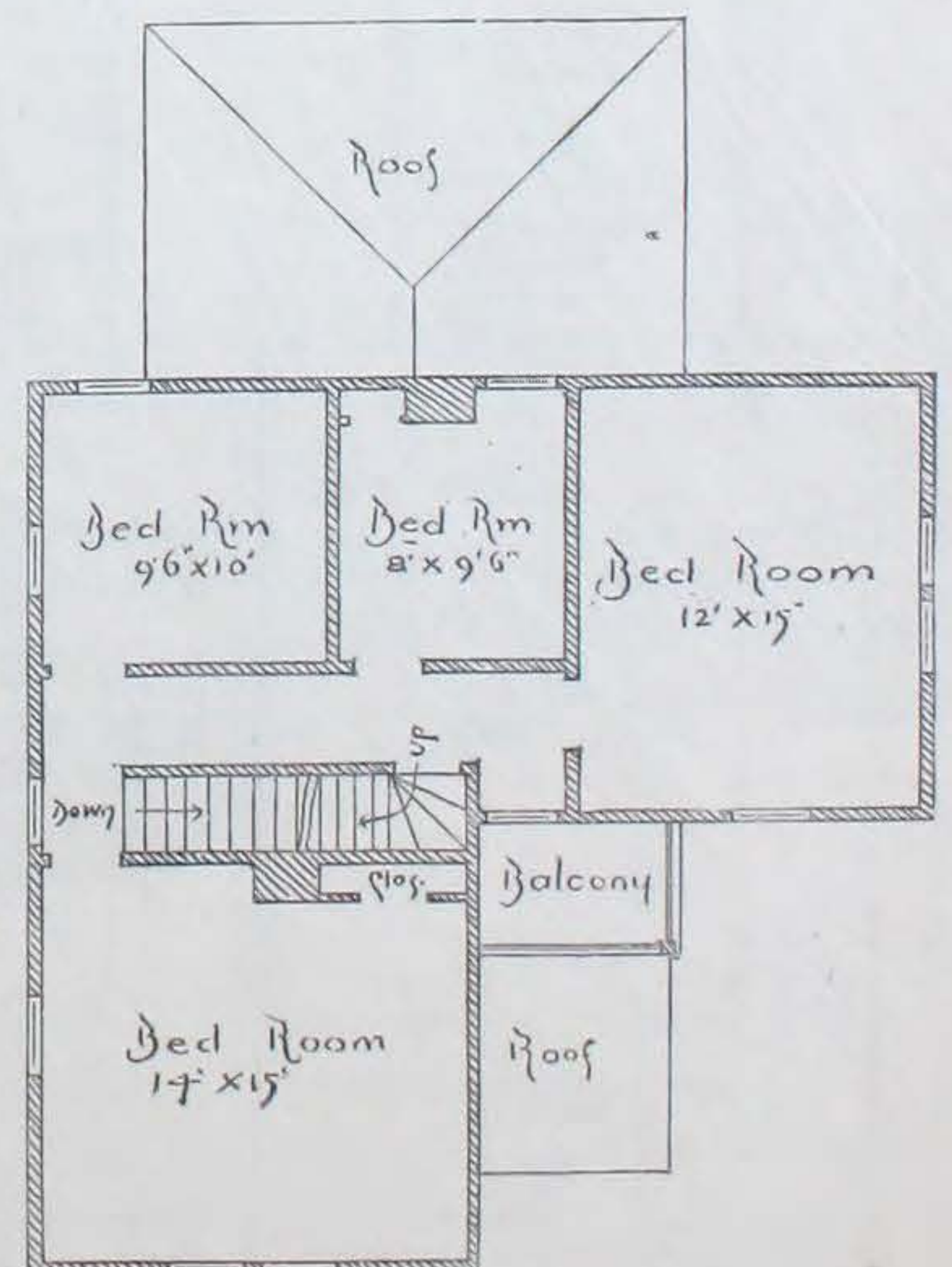
NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in



FIRST FLOOR. NO. 323



SECOND FLOOR. NO. 323



DESIGN No. 324. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 324

SIZE OF STRUCTURE: Front, 21 ft., 6 in. Side, 45 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES; Cellar, 6 ft., 6 in.; First Story, 9 ft., 2 in.; Second Story, 9 ft.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, clapboards; Gables, panelled; Roof, shingles.

COST: \$2,200, complete, except kitchen range.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

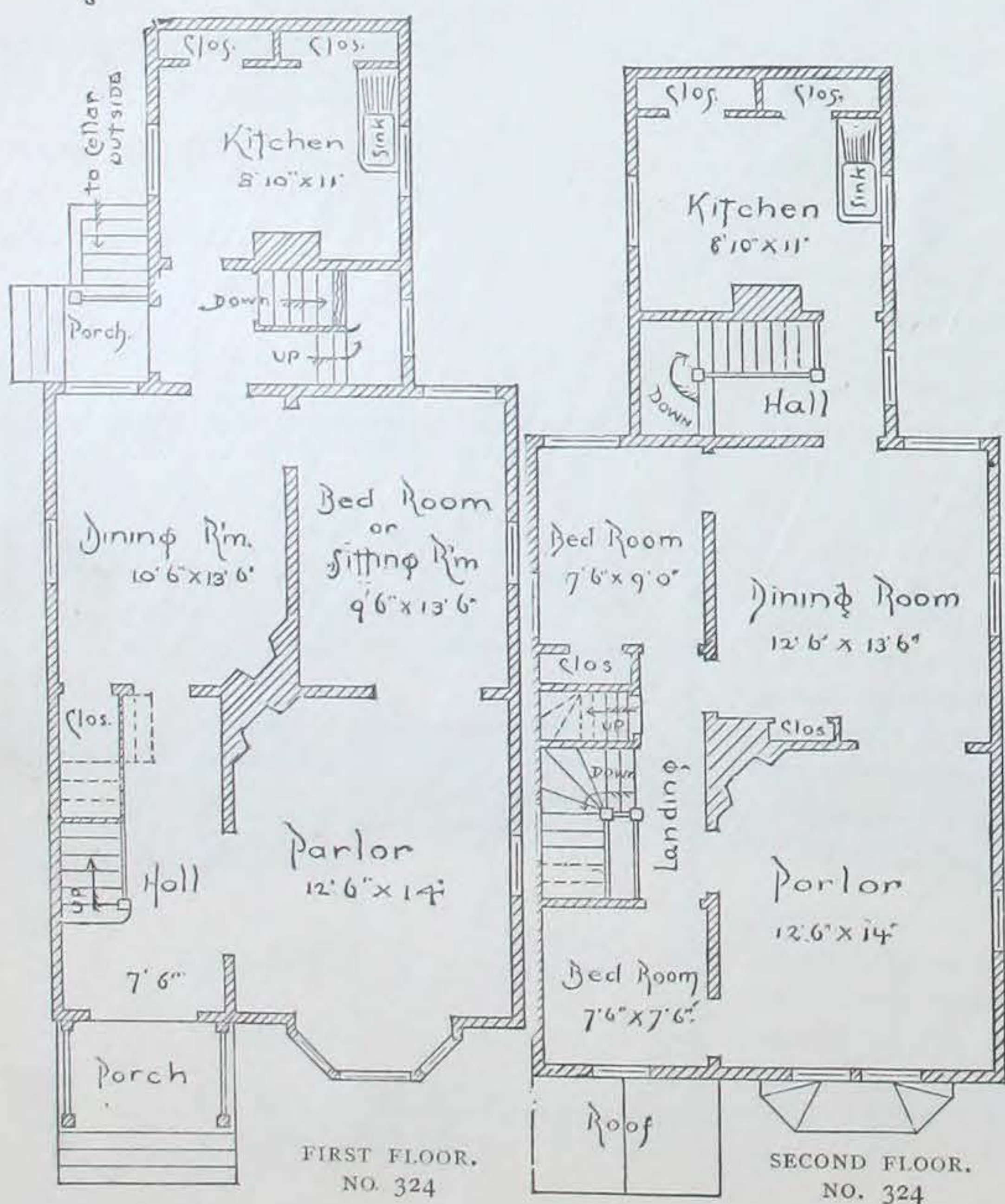
SPECIAL FEATURES.—Designed for a city or village lot, and to accommodate two small families.

By using the rear hall and stairway, the family occupying the second floor can reach the cellar and the yard, and thence along the alleyway by the side of the house to the street, and not intrude on the first floor at all. Or they can descend into the front hall to reach the street.

There is one bed-room of fair size in the attic (10 ft., 6 in. x 11 ft., 6 in.), also a bath-room and water-closet, beside storage-room.

Two small families would find this a pleasant house to live in, and inexpensive to build.

It is quite suggestive to the man of moderate or small means who is looking for a good investment. If his family is small, and he is now paying rent, what better investment can he make than to build this house, which provides a home rent free, and insures an income at the same time?



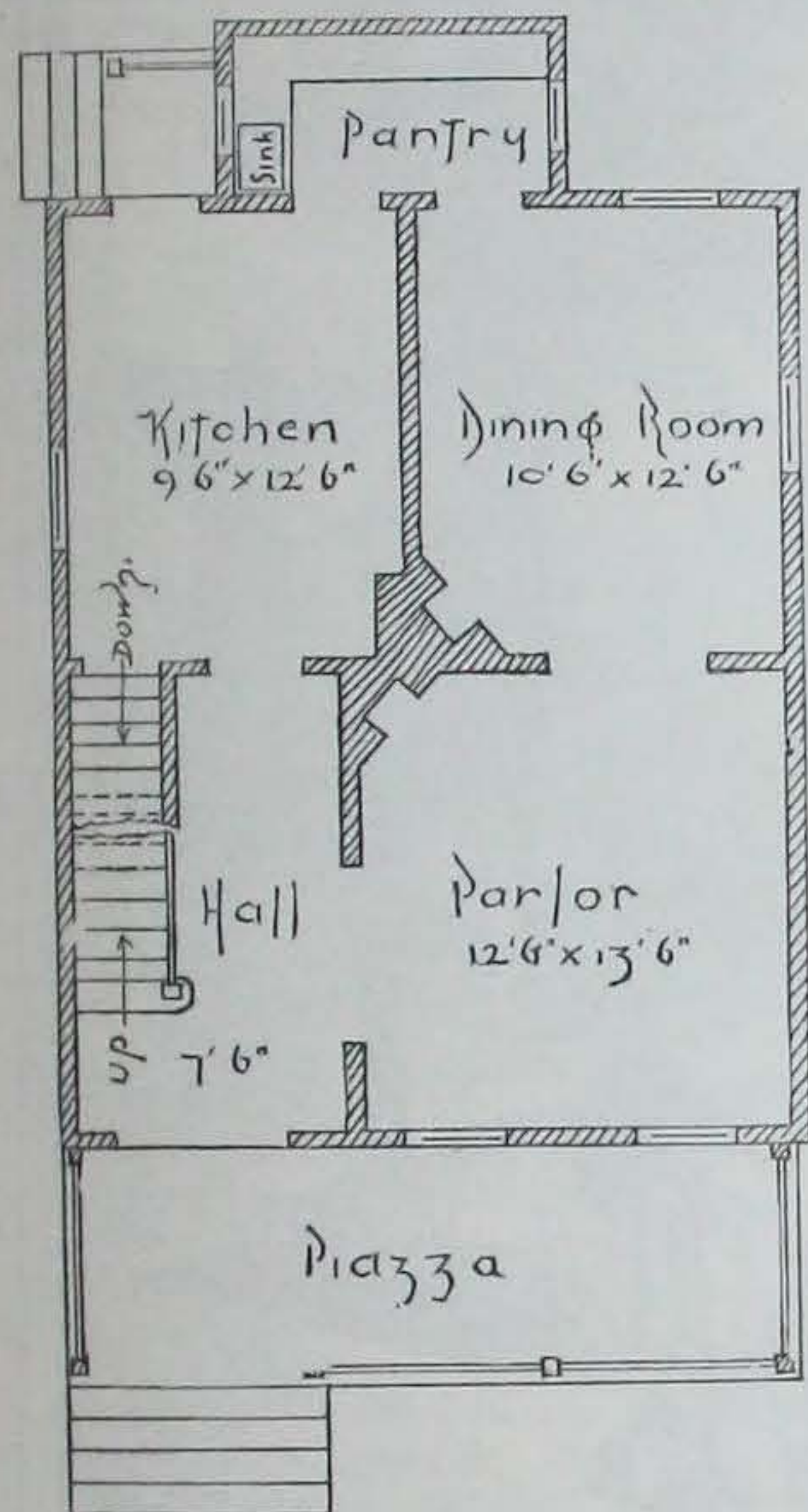
DESCRIPTION OF DESIGN NUMBER 325

SIZE OF STRUCTURE: Front 21 ft., 6 in. Side, 27 ft., extreme depth, 38 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 8 ft., 8 in.; Second Story, 8 ft.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, clapboards, front shingled; Roof, shingles.



FIRST FLOOR. NO. 325

COST: \$1,600, complete.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced, or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

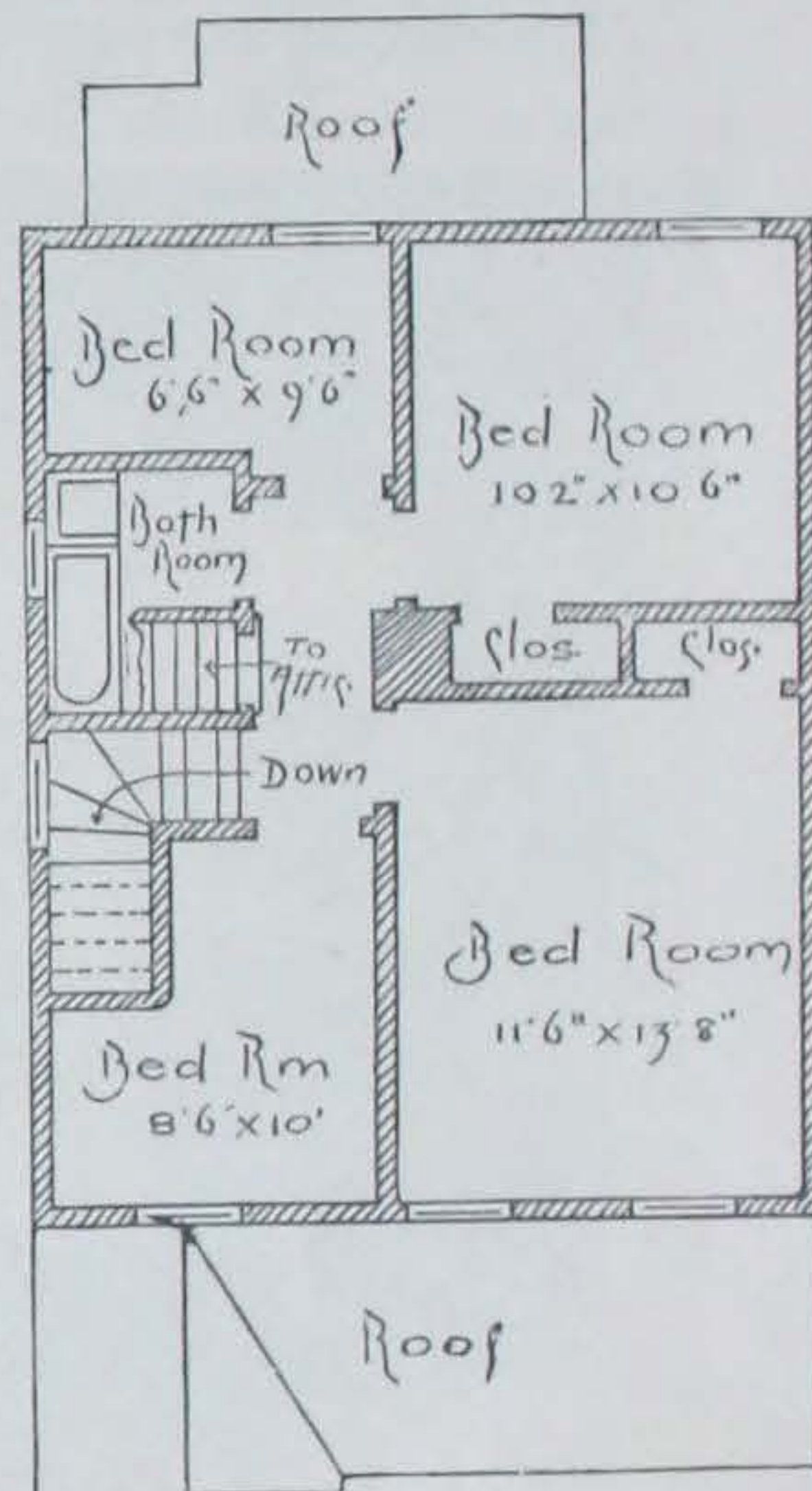
SPECIAL FEATURES.—This is a modification of the preceding design.

The front gable is panelled, and the second story front shingled down to the veranda roof.

Cellar under the whole house, with a stairway to same from the kitchen, and an entrance from the outside.

Bath-room and four bed-rooms in the second story. Two bed-rooms can be finished in the attic if required, but this is not included in our estimate.

This plan is a very popular one, and has been built many times from our plans, that is, the same general arrangement of rooms, larger or smaller or modified, as it can be in many ways. It has always proved more than satisfactory. Where the size of the plot of ground admits, it is better to build the stairway projection as shown in the plans of Number 326.



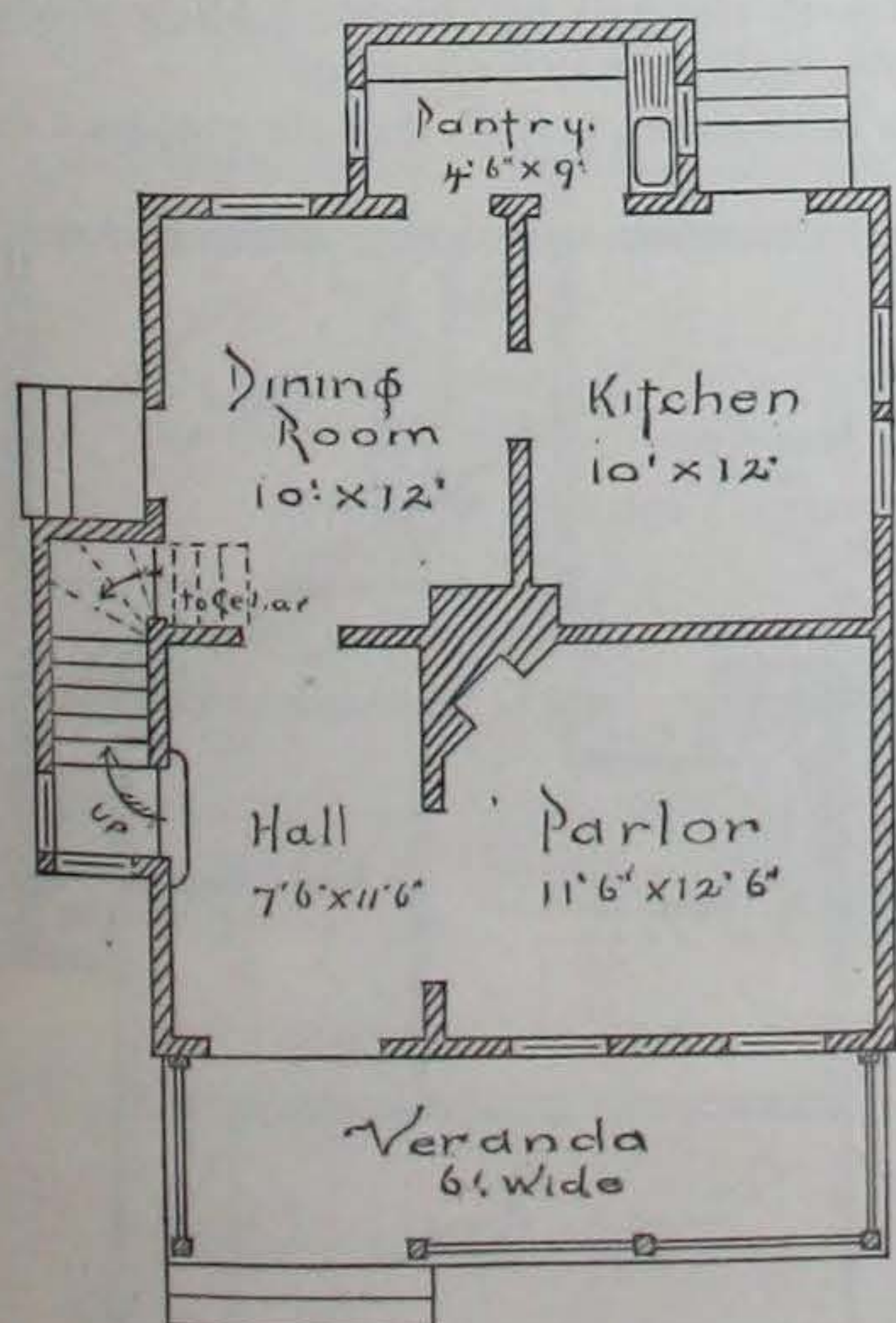
SECOND FLOOR. NO. 325

DESCRIPTION OF DESIGN NUMBER 326

SIZE OF STRUCTURE: Front, 21 ft., 6 in.; width, including stair-case extension, 25 ft. Side, 30 ft., not including front veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 8 ft., 8 in.; Second Story, 8 ft.



FIRST FLOOR. NO. 326

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, clapboards; front above veranda roof is shingled; Roof, shingles.

COST: \$1,600, complete, except kitchen range.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim,

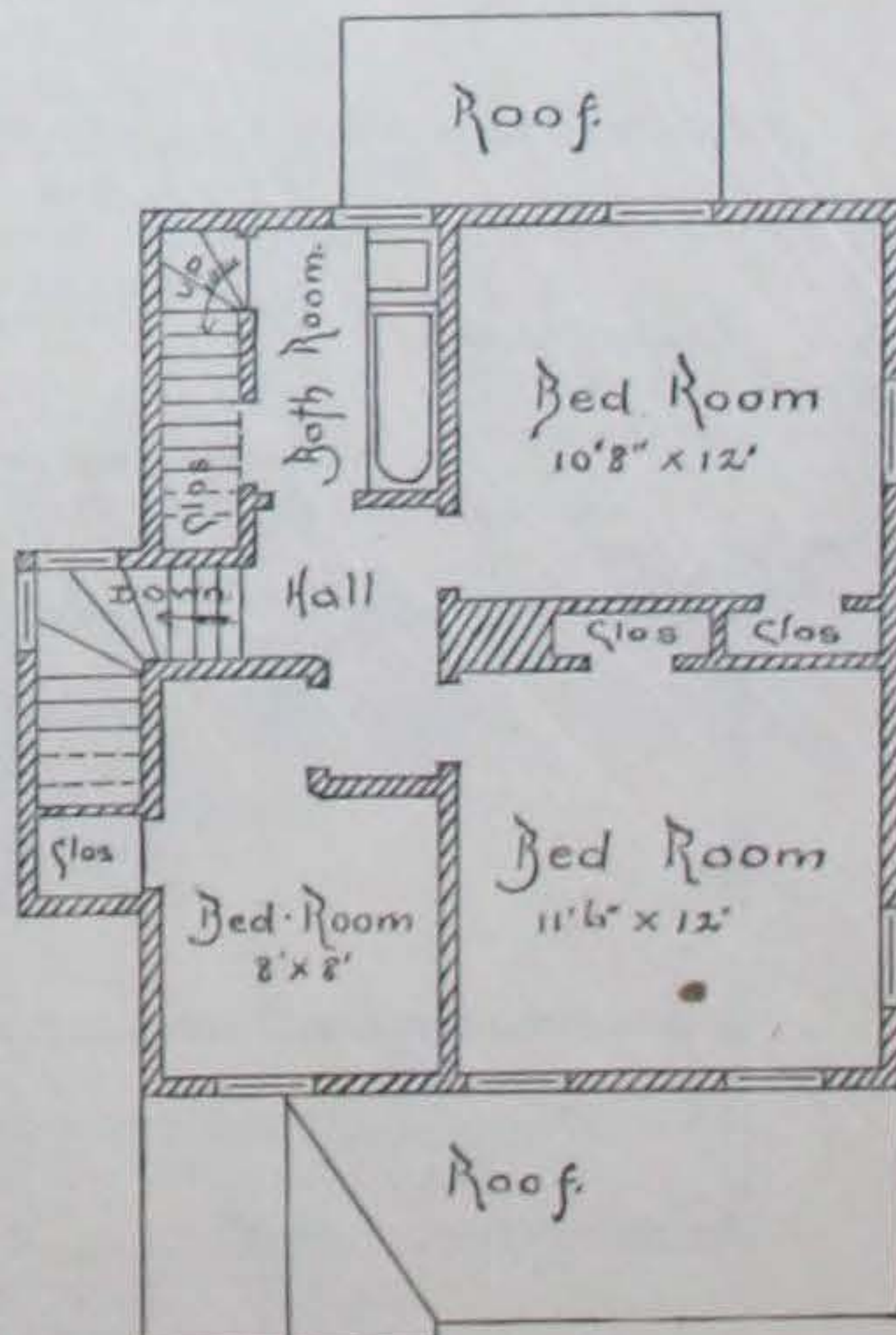
Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

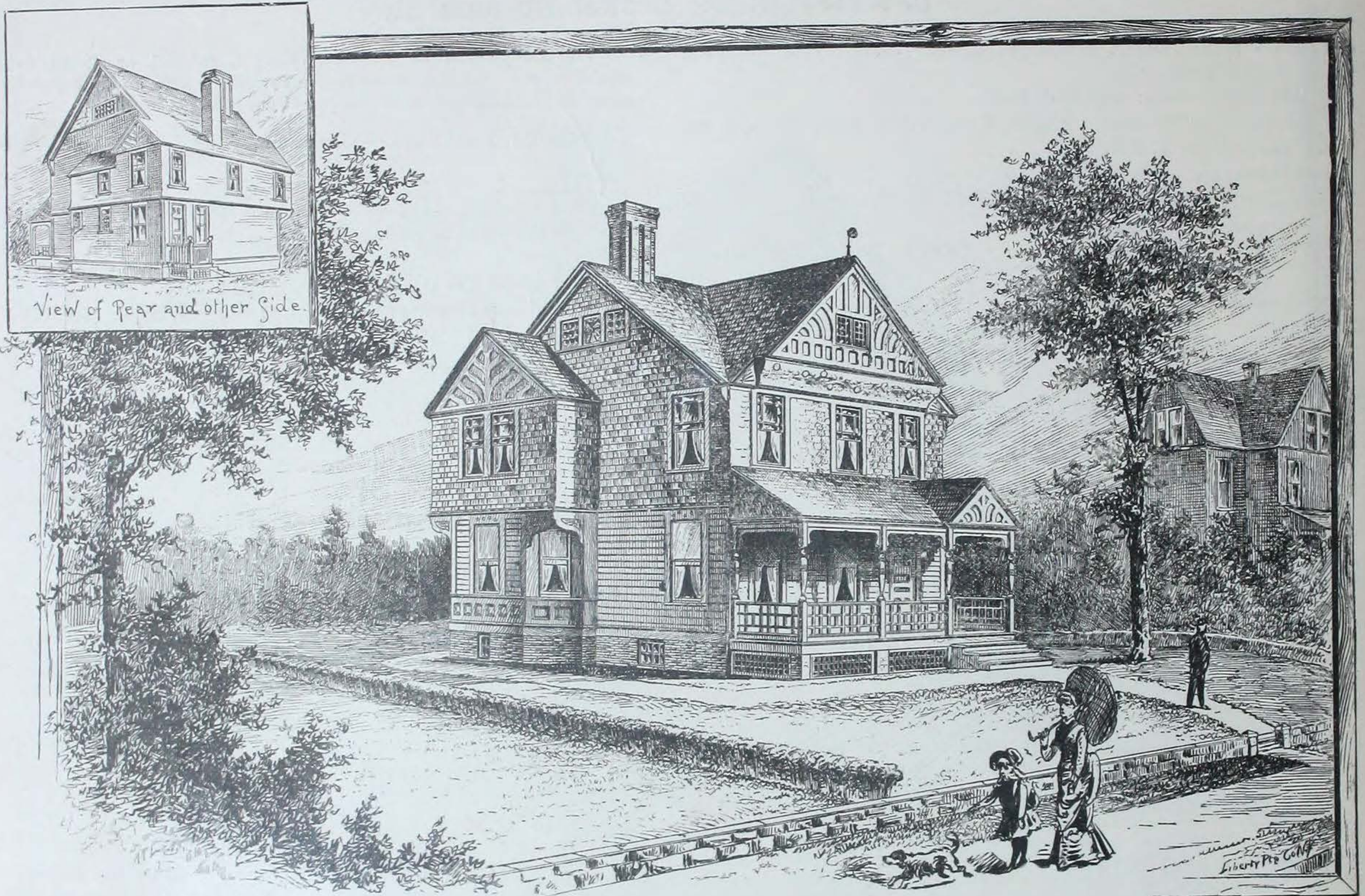
SPECIAL FEATURES.—A small but complete and compact house, similar in appearance to Design Number 324 on the preceding page. The veranda is carried across the front. The walls are shingled above the veranda and a roof, and it has a stairway projection. Its appearance is not so plain as that of Number 324.

Three bed-rooms and a bath-room in second story. Two rooms can be finished in the attic if desired.

Cellar under the whole house; inside and outside entrance to same.



SECOND FLOOR. NO. 326



DESIGN No. 327. PERSPECTIVE VIEW

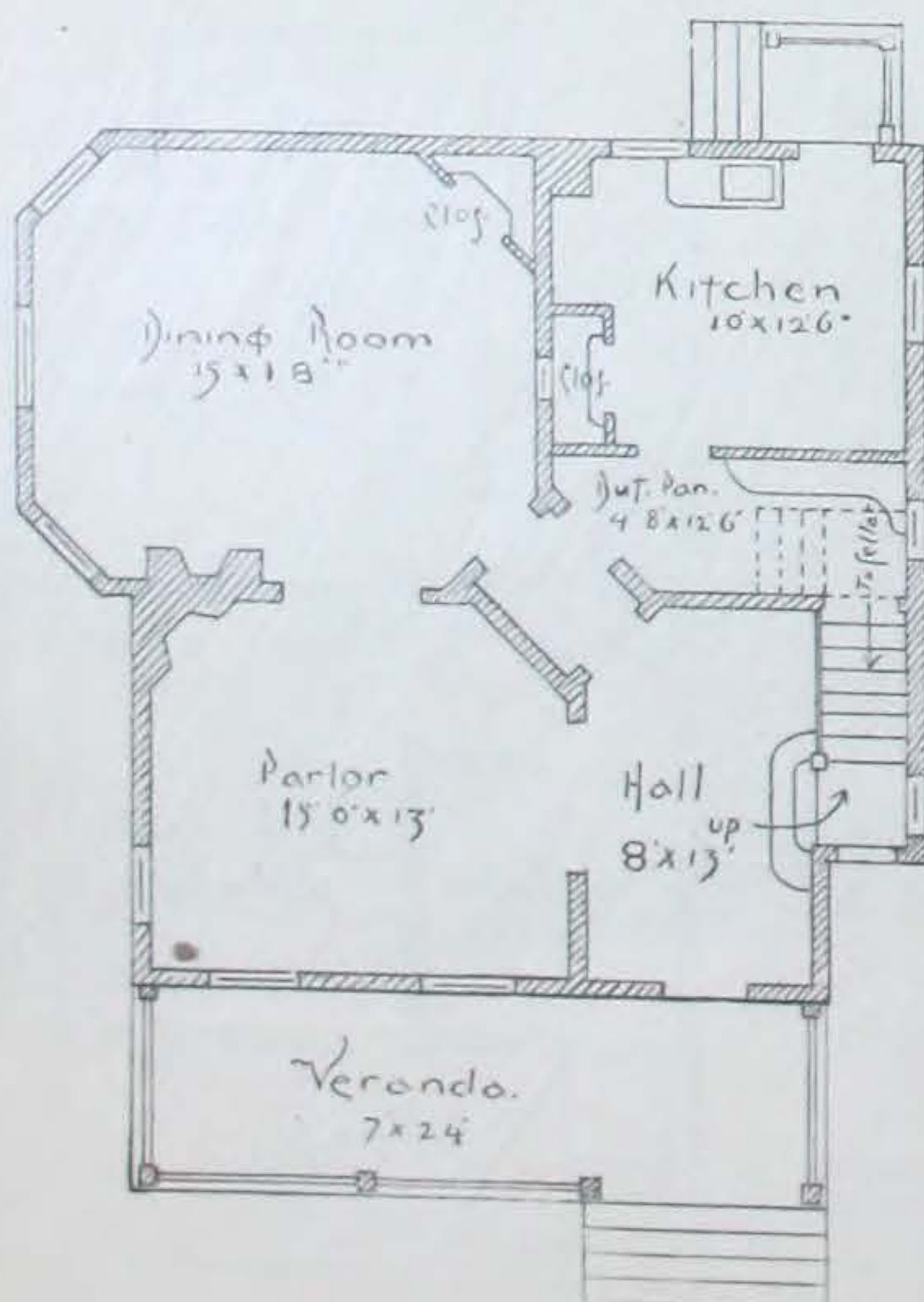
DESCRIPTION OF DESIGN NUMBER 327

SIZE OF STRUCTURE: Front, 24 ft., 6 in.; extreme width, 32 ft. Side, 29 ft., 6 in., not including veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft., 3 in.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Roof, shingles.



FIRST FLOOR. NO. 327

COST: \$2,200, complete, except mantels and kitchen range.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.

—The views given above show the true appearance of the Model House when properly put together, or when actually constructed; the large view showing the front and left hand side, and the small view the rear and the right hand side. Detailed directions for putting the Model together are given on the next page.

This is a very popular house, and deservedly so. It combines a most

convenient arrangement of rooms with a very attractive exterior, and is built at a moderate cost.

The large butler's pantry, well lighted, effectively separates the kitchen, and kitchen odors, from the rest of the house.

The dining-room is so large that it makes a fine sitting-room as well. A small opening between this room and the kitchen closet, with a sliding door, makes it easy to pass dishes through, and economizes steps and time.

The parlor is connected with the hall by double folding doors, and with the dining-room by a wide portiere opening.

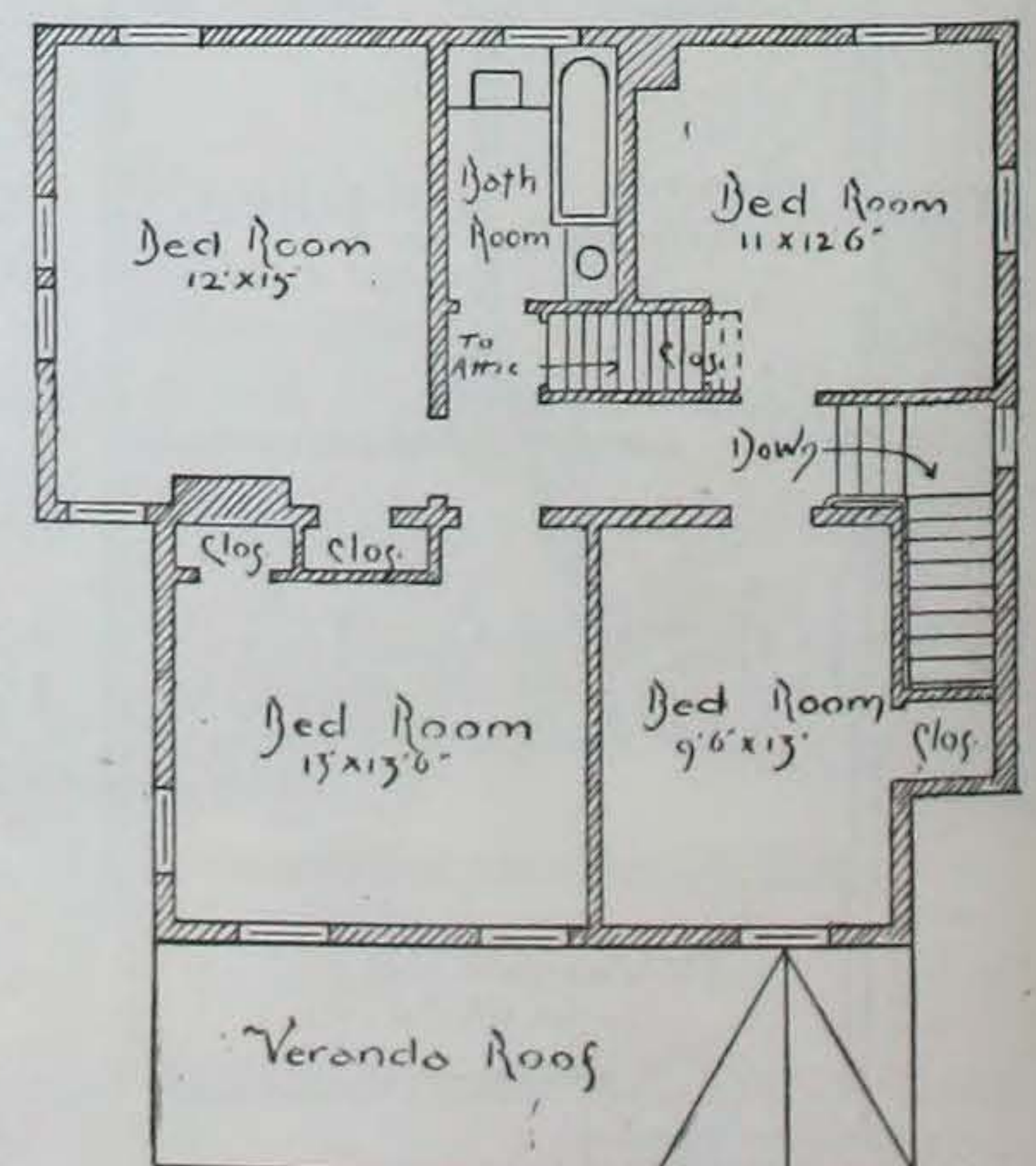
Four large bed-rooms, a bath-room, and closets are obtained on the second floor, and two good rooms can be finished in the attic if desired.

Cellar under the hall and parlor.

The veranda is 7 ft. wide.

The house can be heated by a fire-place heater in the parlor or dining-room. Or the space under the dining-room and kitchen can be excavated and a furnace put in, at an additional expense of about \$225.

The water pipes are protected against freezing by carrying them by the side of the kitchen chimney.



SECOND FLOOR. NO. 327

A PAPER MODEL OF DESIGN NUMBER 327

DIRECTIONS FOR PUTTING IT TOGETHER

As a supplement to this number of Shoppell's Modern Houses we present a sheet of colored diagrams, so arranged and drawn as to be readily put together to form an accurate miniature model of Design Number 327. We select this particular cottage to illustrate in this way because it is one of our most popular designs; being of a moderate cost, it is within the reach of many to build.

At the first glance the diagrams may appear intricate, but by commencing at No. 1 of the directions found below and by following them carefully in detail, the operation will be found to be simplicity itself, a child of eight years of age being fully competent, with ordinary care, to construct it.

This model will be found of value to the architect and draughtsman as well as to the intending builder, who, in a few hours can realize, in a most interesting and instructive manner, the appearance and proportions of a complete and perfect building.

Of course like everything else that is worth doing at all, it is worth doing well.

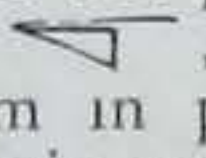
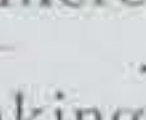
The plans are accurately drawn on a scale of 3-16 of an inch to the foot. Each piece will be found to be a perfect fit if carefully adjusted according to directions.

The first requirement is a perfectly firm and level base. To secure this cut out the ground plan and paste or gum it carefully on a block of wood of the proper size, or on thick pasteboard. The wood is preferable, as it overcomes all tendency to warping.

Use a sharp pointed knife to score the pieces on the dotted lines, being careful to pass the point as nearly through the centre of the dotted line as possible. Do not cut too deep, merely enough so that on bending the paper it will make a sharp, clean angle. This should be tried first on a margin of the paper. After scoring all the dotted lines of a piece (using a straight-edge or ruler), bend all the portions so scored into perfect shape before attempting to gum them. This will give at once a clear idea of the form of the part and where and how it fits.

In some cases (for instance the base of the roofs), the colors run inside the dotted lines. This is simply to prevent raw edges of white appearing if roof pieces do not fit accurately. If proper care is used everything will fit accurately.

The gum should be as thick as possible—like pitch—so that the parts will adhere quickly and not warp. To secure this, get five cents worth of powdered gum-arabic at the nearest drug store and pour it into any bottle of common mucilage, stirring it thoroughly. This is necessary for rapid work and a satisfactory result.

The cornices may puzzle the beginner at first—it is simply necessary, after scoring all the dotted lines of a piece, to bend the parts so scored one under the other until they are in this position , then gum the two upper horizontal surfaces together and hold them in position until they adhere firmly. The eaves of the gables of the main roof assume this form . All the moldings or cornices of a piece should be firmly gummed (making them take as little room as possible) before attaching the pieces in place.

In setting up the four walls of the main building and the walls of the projections care should be taken that they come accurately to the lines on the ground plan, as a poor beginning makes a worse ending.

Perspective views of the cottage as it appears when completed are shown on the opposite page.

The different parts go together in the following order:

- No. 1.—A. & B. Front and one Side Wall.
- " 1.—C. Side Wall.
- " 1.—D. Rear Wall.

NOTE.—It is better to attach these four walls together before fastening them to the ground plan; taking care to adjust the end of No. 1.—C and No. 1.—B marked "X" to the points on No. 1.—D marked "XX" as No. 1.—D projects beyond the others at both ends.

- No. 2.—A. Base of Projection (octagonal), on Wall No. 1.—B.
- " 2.—B. Piece forming brackets and base of upper portion of projection.
- " 2.—C. Walls of upper portion of projection (rectangular.)
- " 2.—D. Portion of Roof of same with cornices.

NOTE.—Wherever cornices or moldings occur they should be bent and gummed in shape before attaching the piece of which they are a part, in its place.

- No. 3.—A. Walls of Projection on side No. 1.—C.
- " 3.—B. Piece forming cornice and base of Roof of same.
- " 3.—C. Piece forming cornice and base of Gable of same.
- " 3.—D. Part of Gable Roof. Put these together and then fasten
- " 3.—E. Gable Piece. in place.

NOTE.—Where brackets occur in this explanation the pieces enclosed by them are to be fastened together before attaching to building.

- No. 3.—F. Roof on lower portion of projection. }
- " 3.—G. Gable end of same. }

- No. 4.—A. Front and sides of Piazza. }
- " 4.—B. Floor of Piazza. }
- " 4.—C. Piece forming cornice and base of Roof. }
- " 4.—D. Roof of Piazza. }
- " 4.—E. Gable end of Roof. }
- " 4.—F. Gable end of Roof. }
- " 4.—G. Gable Roof over Entrance. }
- " 4.—H. Gable Front over Entrance. }

- No. 5.— Main Roof.

NOTE.—Care should be taken that all the cornices and moldings on this piece should be firmly and accurately fastened before putting it in place; and it should not be fastened in position till all the walls, piazza, &c., are firmly adjusted.

- No. 6.—A. Front Gable Roof.
- " 6.—B. Gable Piece showing ornaments at lower corners. }
- " 6.—C. Front Gable Piece with ogee at bottom. }

NOTE.—The curves of the ogee to be got with back of knife blade—curling the strip lightly, back and front until it comes to its place.

- " 6.—D. Brackets under eaves at corners.
- No. 7.— Front steps to Piazza.

NOTE.—The dotted lines on stairs marked "X" are to be slightly scored from back of paper so as to bend an opposite direction.

- No. 8.—A. Platform and steps at Rear Door.
- " 8.—B. Railing to same.
- No. 9.—A. Chimney on Rear of Roof.
- " 9.—B. Chimney on Ridge of Roof.
- " 10.— Ornament on Ridge of Front Gable.

DESCRIPTION OF DESIGN
NUMBER 328

SIZE OF STRUCTURE: Front, 24 ft., 6 in.; extreme width, 32 ft. Side, 45 ft., not including veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft., 3 in.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Roof, shingles.

COST: \$2,600, complete, except mantels and kitchen range.

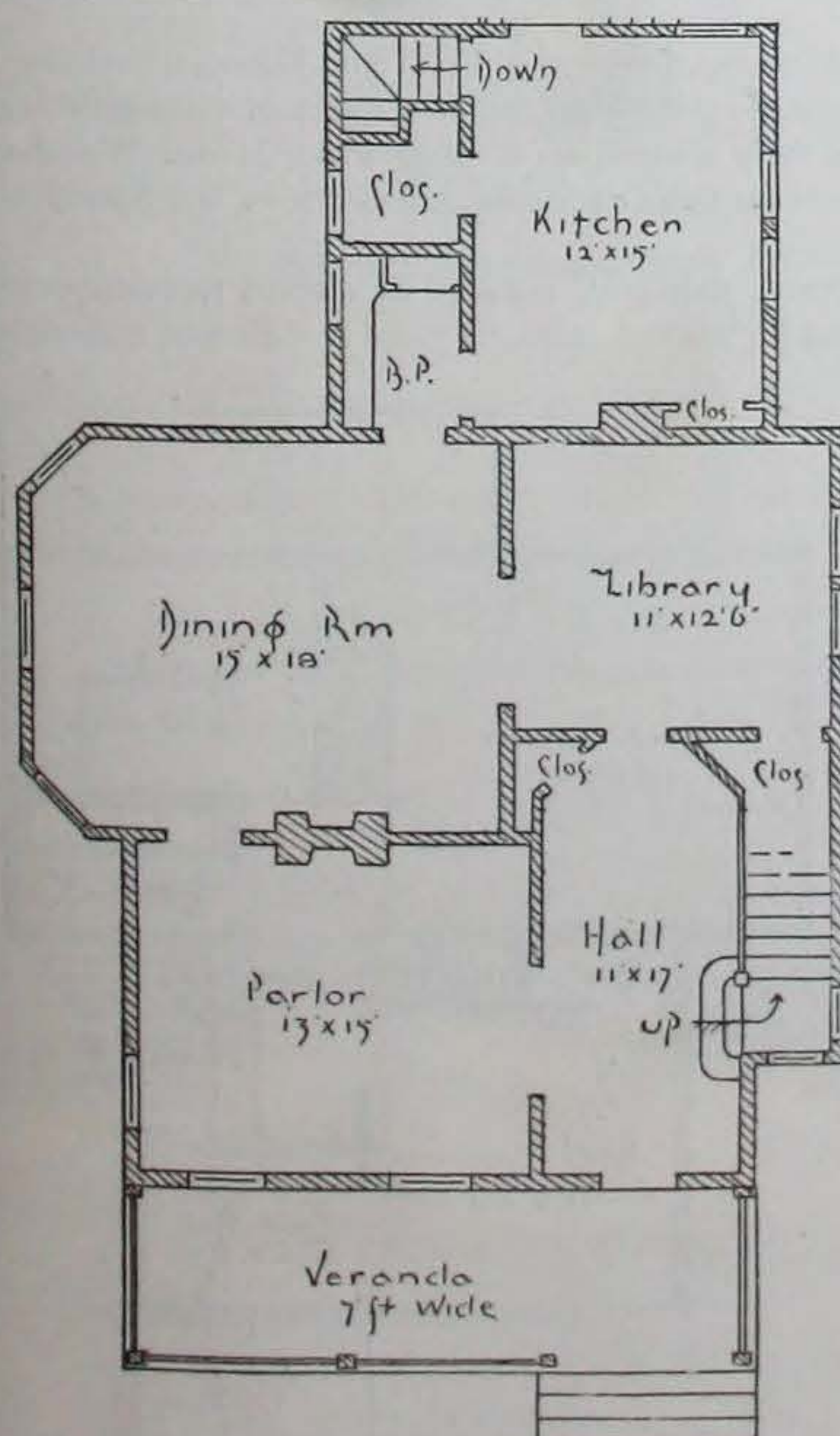
[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTE

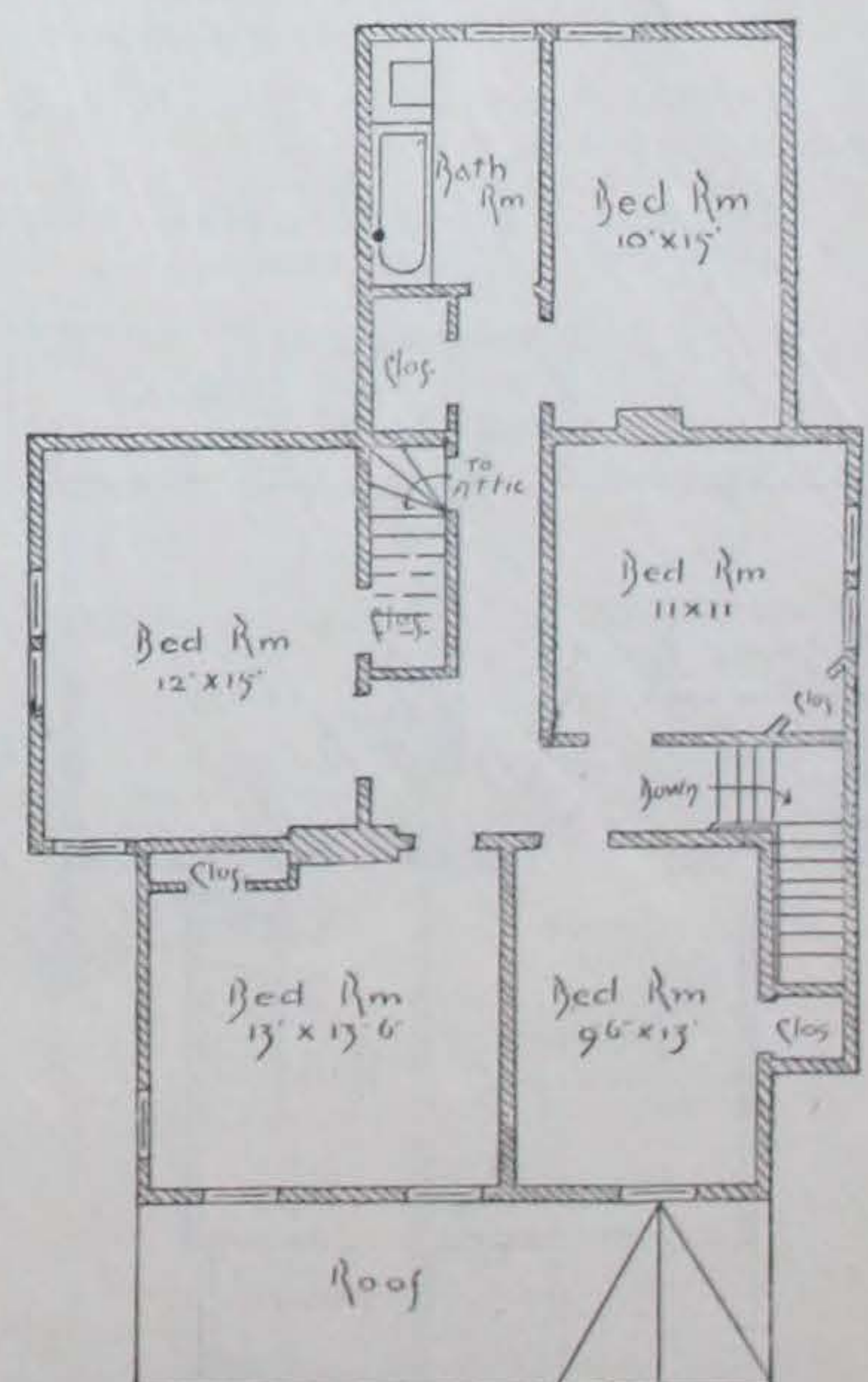
The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

SPECIAL FEATURES.—A modification of the design shown on the opposite page.

An extension is added at the rear containing kitchen and pantries on the first floor, and a bath-room, bed-room and closet on the second floor.



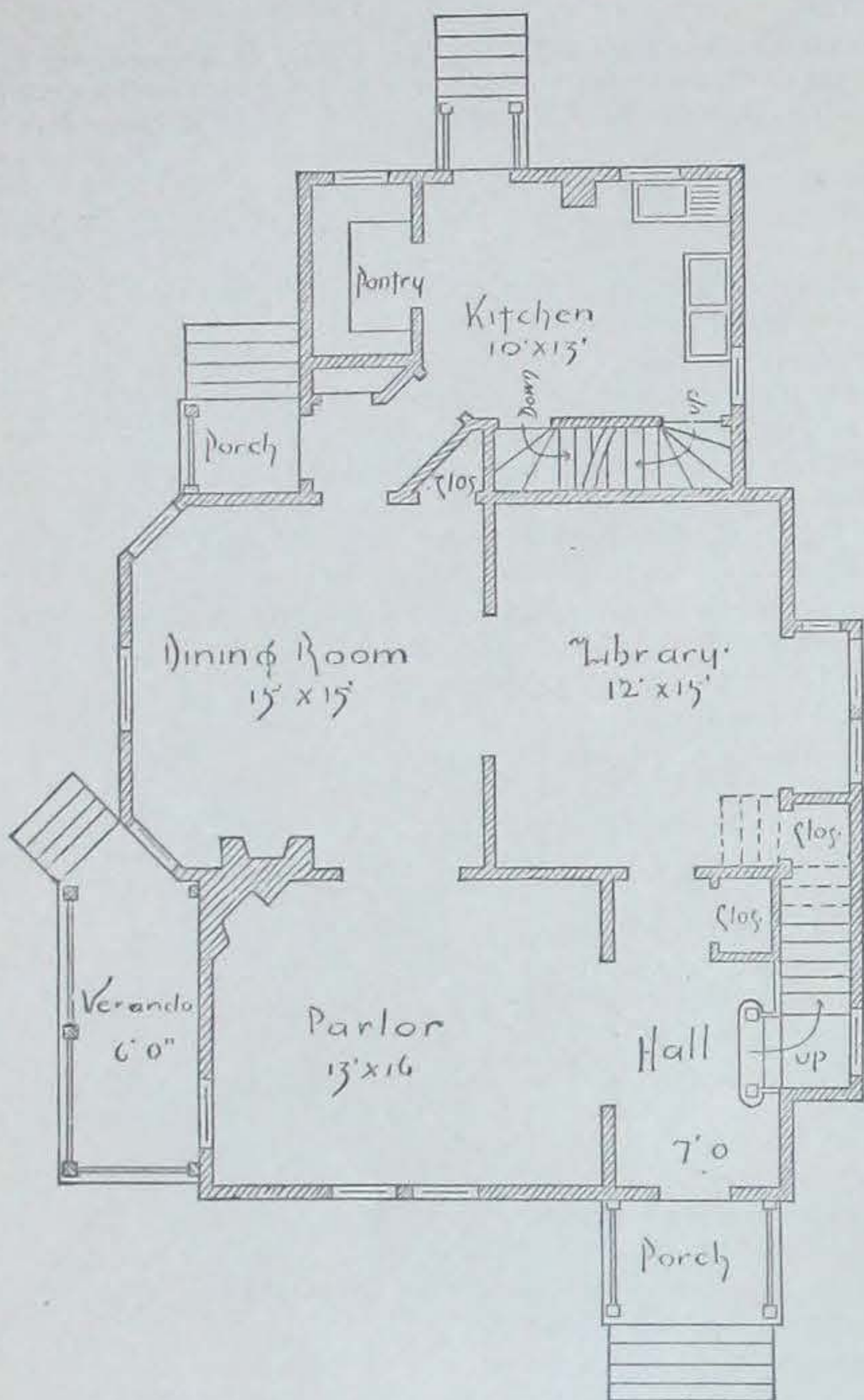
FIRST FLOOR. NO. 328



SECOND FLOOR. NO. 328

DESCRIPTION OF DESIGN NUMBER 329

SIZE OF STRUCTURE: Front, 24 ft., 6 in.; width through dining-room and library, 31 ft., 6 in. Side, 43 ft



FIRST FLOOR. NO. 329

SIZE OF ROOMS:
See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft., 3 in.

MATERIALS:
Foundation, stone; First Story, clapboards; Second Story, shingles; Roof, shingles.

COST: \$2,500, complete, except mantels and kitchen range.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers

will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

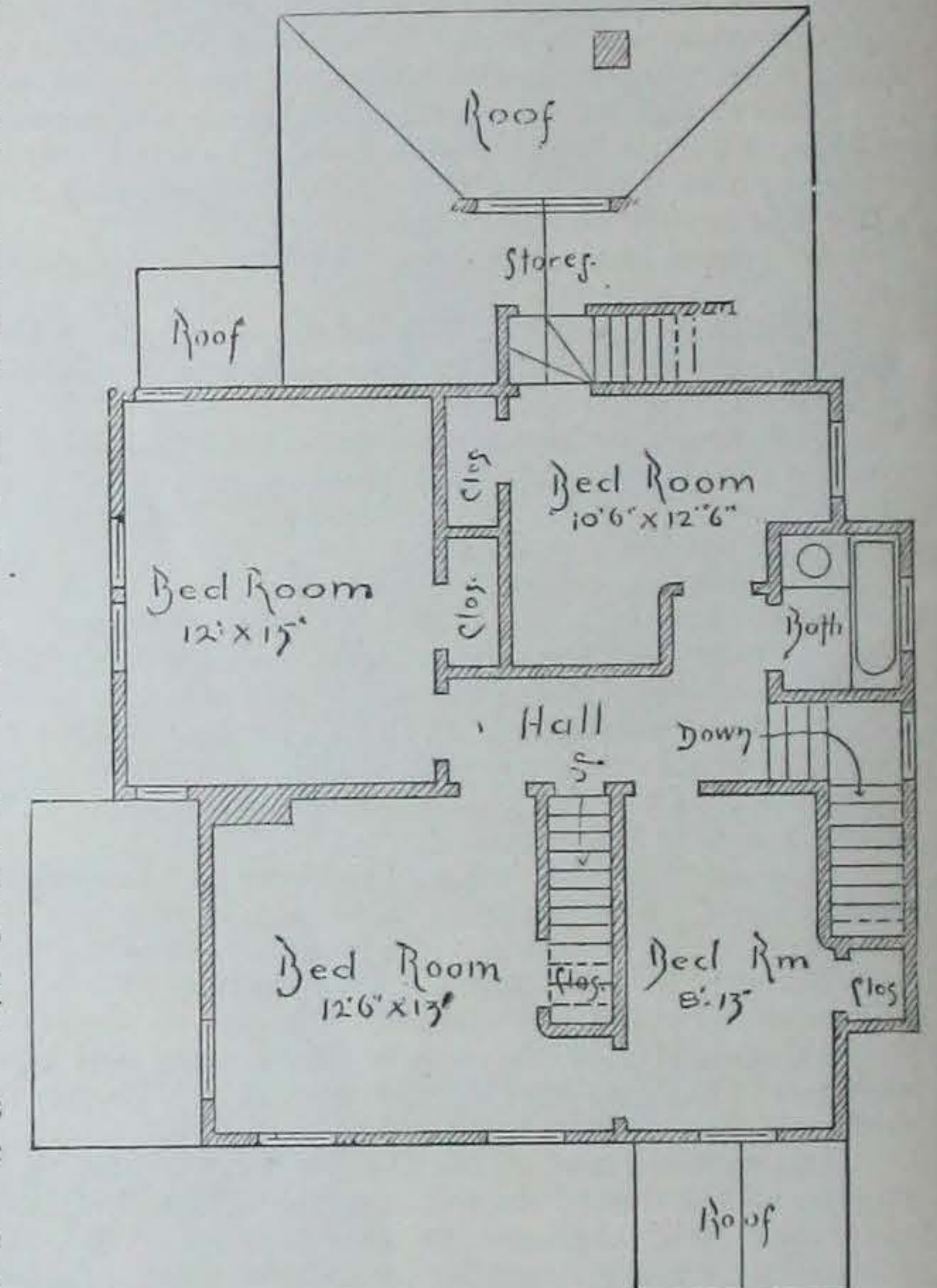
SPECIAL FEATURES.—A modification of design Number 327, having the same general appearance and ground plan, but with an extension added at the rear.

The side window of the parlor opens to the floor, giving access to the veranda.

The back staircase enters the rear bed-room in the second story and also gives access to the storage space under the roof of the extension.

Two good rooms can be finished in the attic.

A cellar under the whole house, with stone walls.



SECOND FLOOR. NO. 329

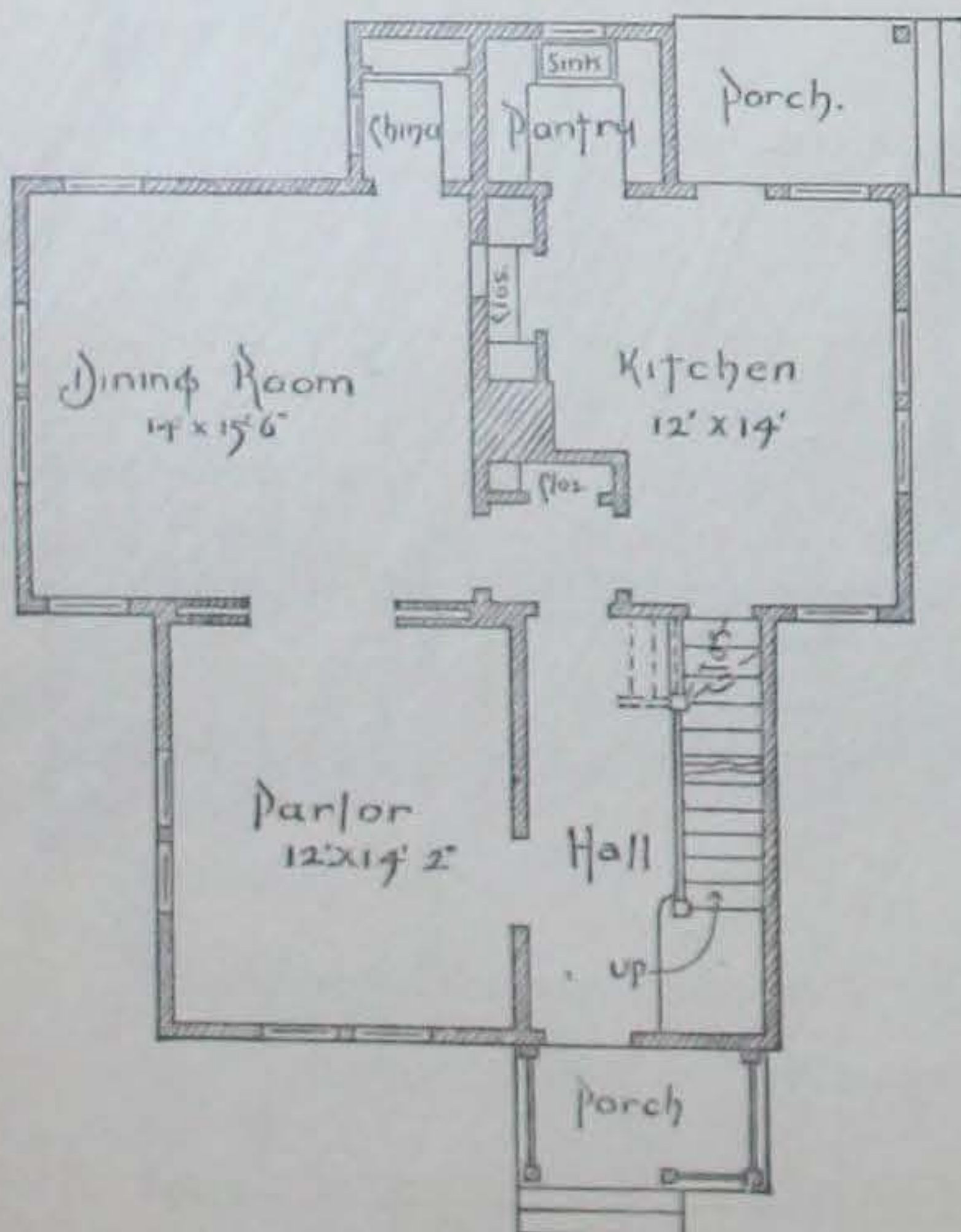
DESCRIPTION OF DESIGN NUMBER 330

SIZE OF STRUCTURE: Front, 21 ft., 6 in.; extreme width, 31 ft. Side 35 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft., 6 in.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles; Roof, shingles.



FIRST FLOOR. NO. 330

COST; \$1,800, complete, except furnace and kitchen range.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers

will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

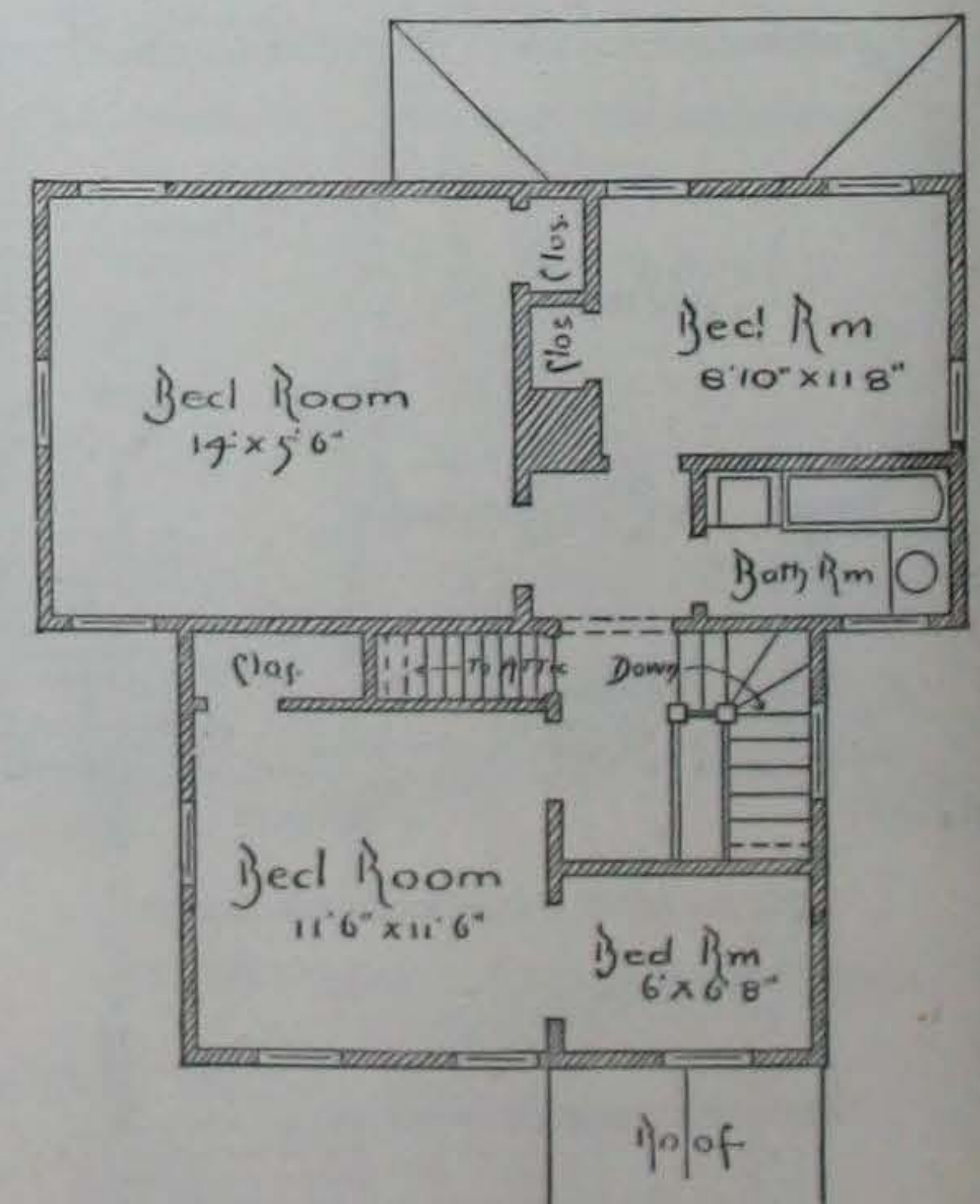
SPECIAL FEATURES.—Similar in appearance and general plan to design Number 327.

A furnace is relied on for heating the house. No chimney is provided for the parlor.

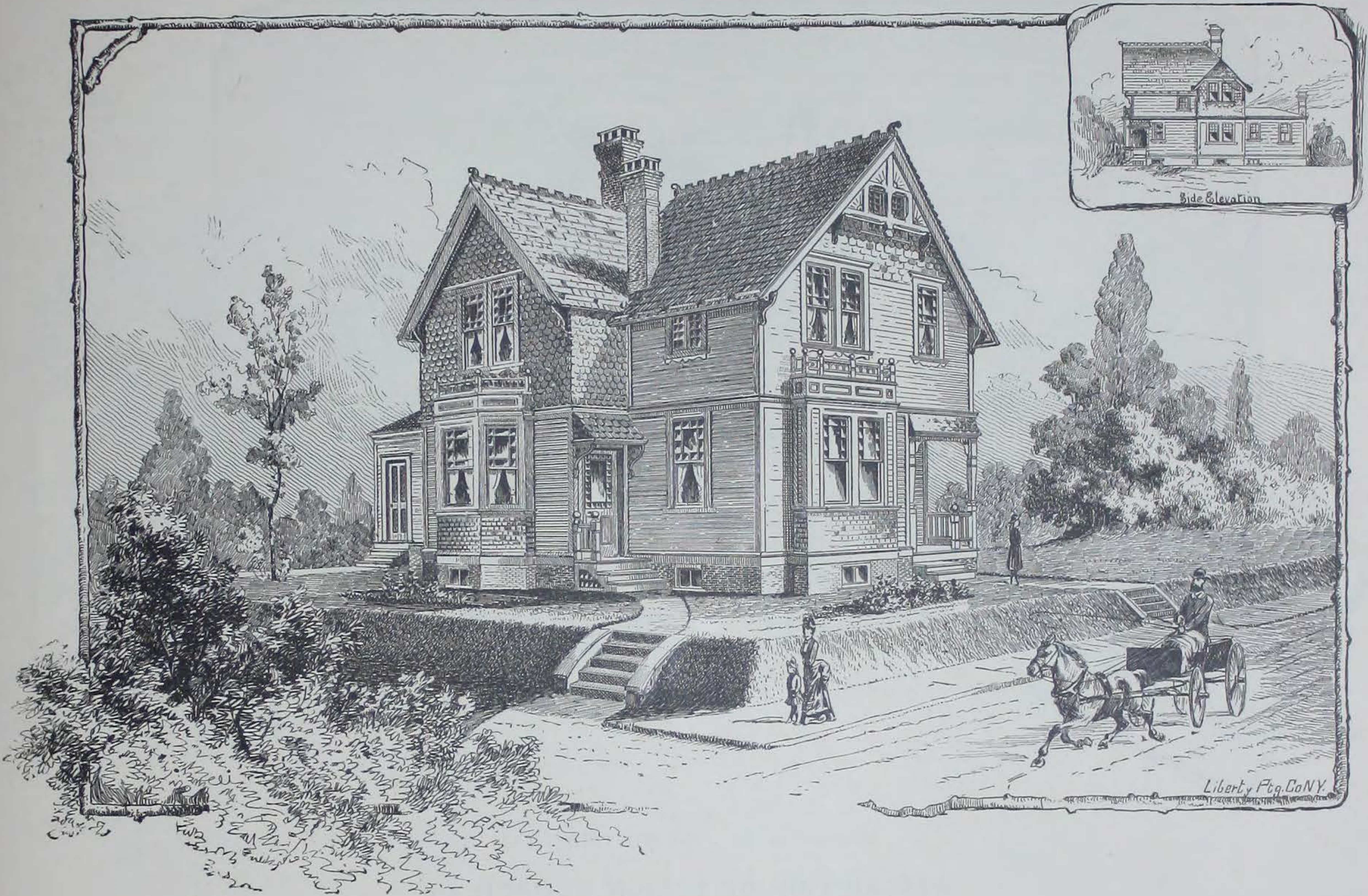
Large china-closet for the dining-room and a pantry for the kitchen.

Four bed-rooms and a bath-room in the second story.

Two bed-rooms finished in the attic. Cellar under the whole house.



SECOND FLOOR. NO. 330



DESIGN No. 331. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 331

SIZE OF STRUCTURE: Front, 22 ft., 6 in. Extreme width, 33 ft., 6 in. Side, 47 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft., 6 in.; Second Story, 9 ft.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, clapboards and shingles; Gables, shingles; Roof, shingles.

COST: \$2,400, complete, except mantels, furnace and kitchen range.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Cellar under the whole house, with stone foundation walls.

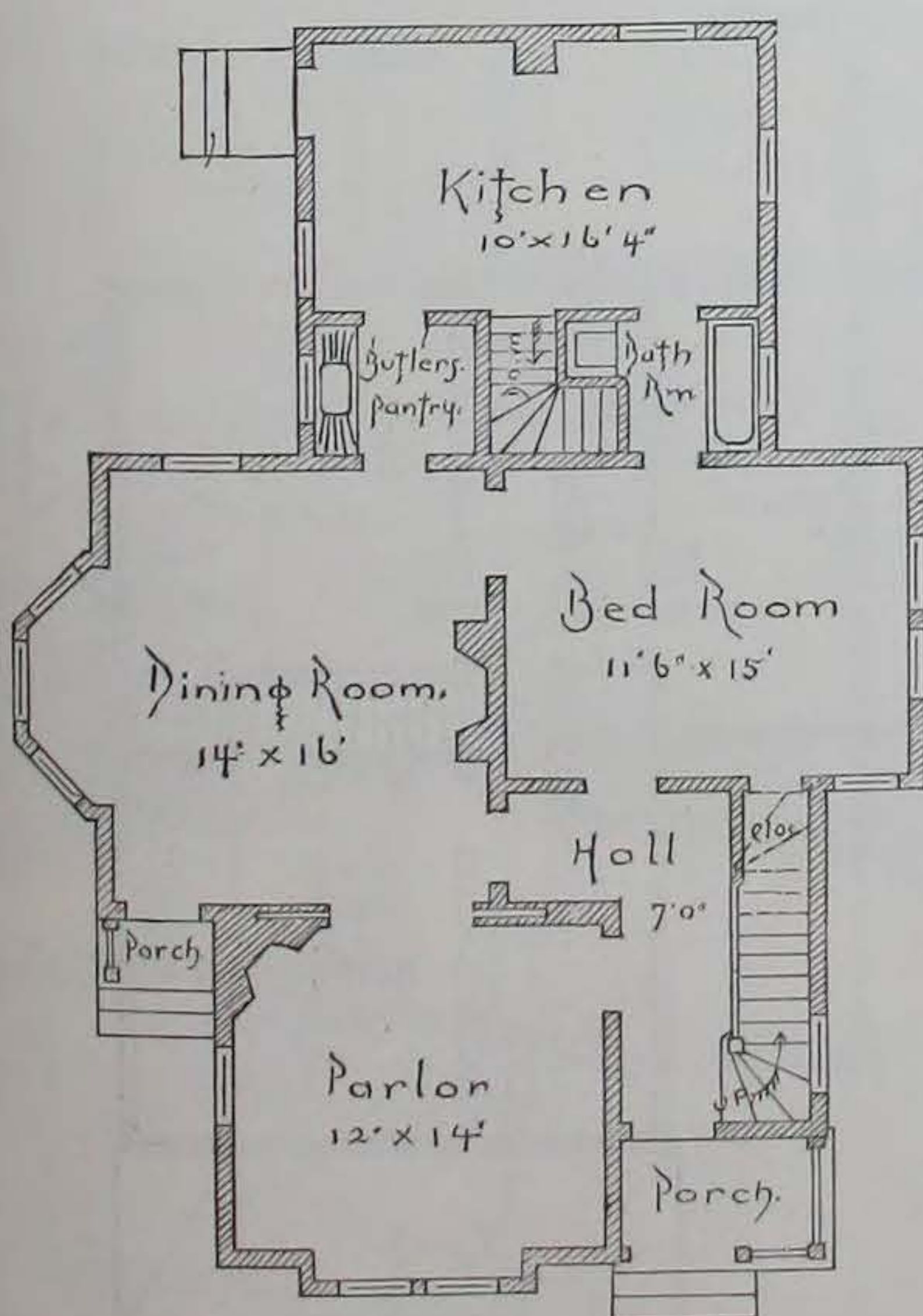
A furnace is used for heating the house in addition to the fireplaces.

Sliding doors between the parlor and the dining-room.

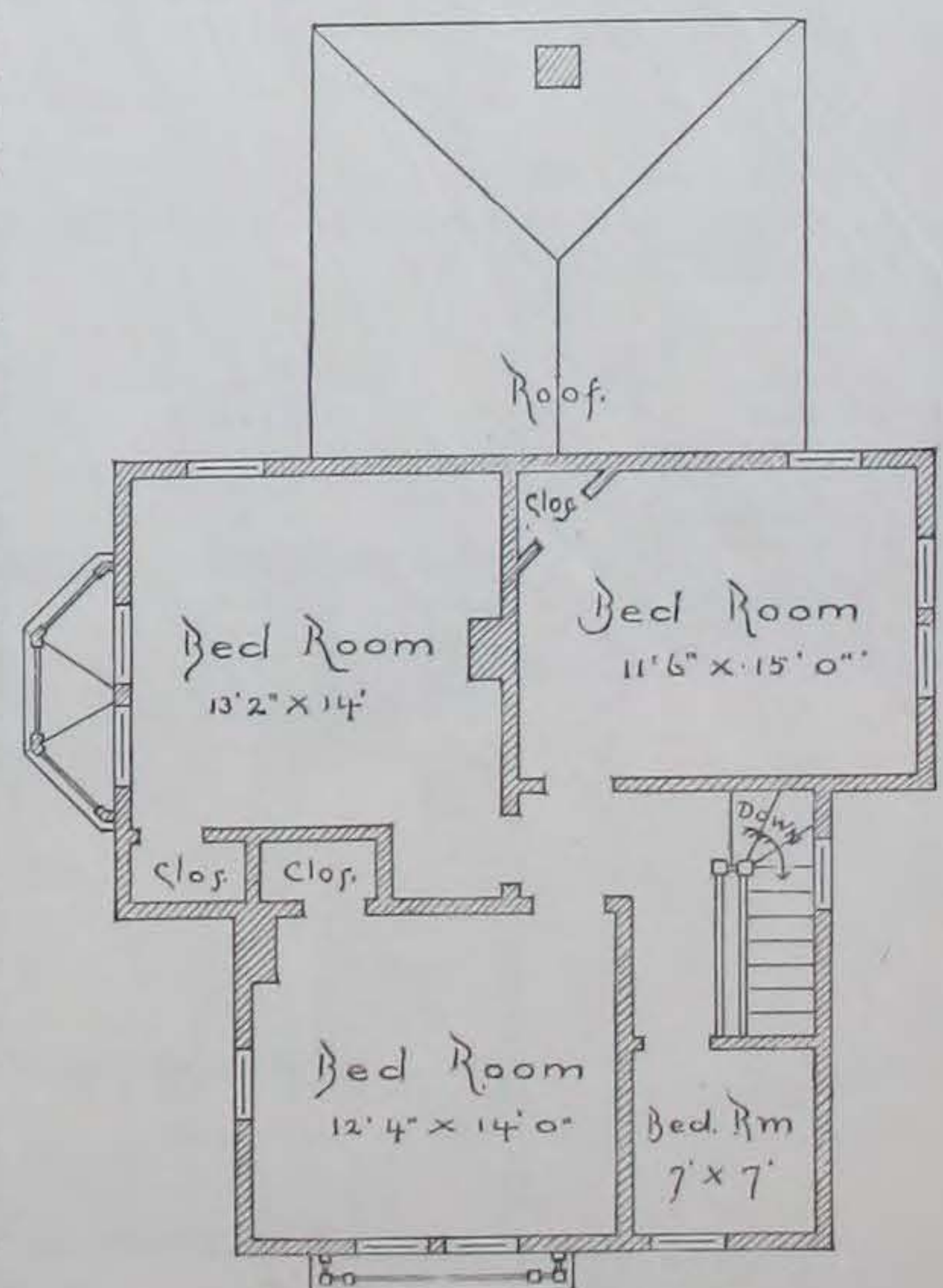
Dresser and sink in the butler's pantry.

Bath-tub and water-closet on first floor, connected with the bed-room.

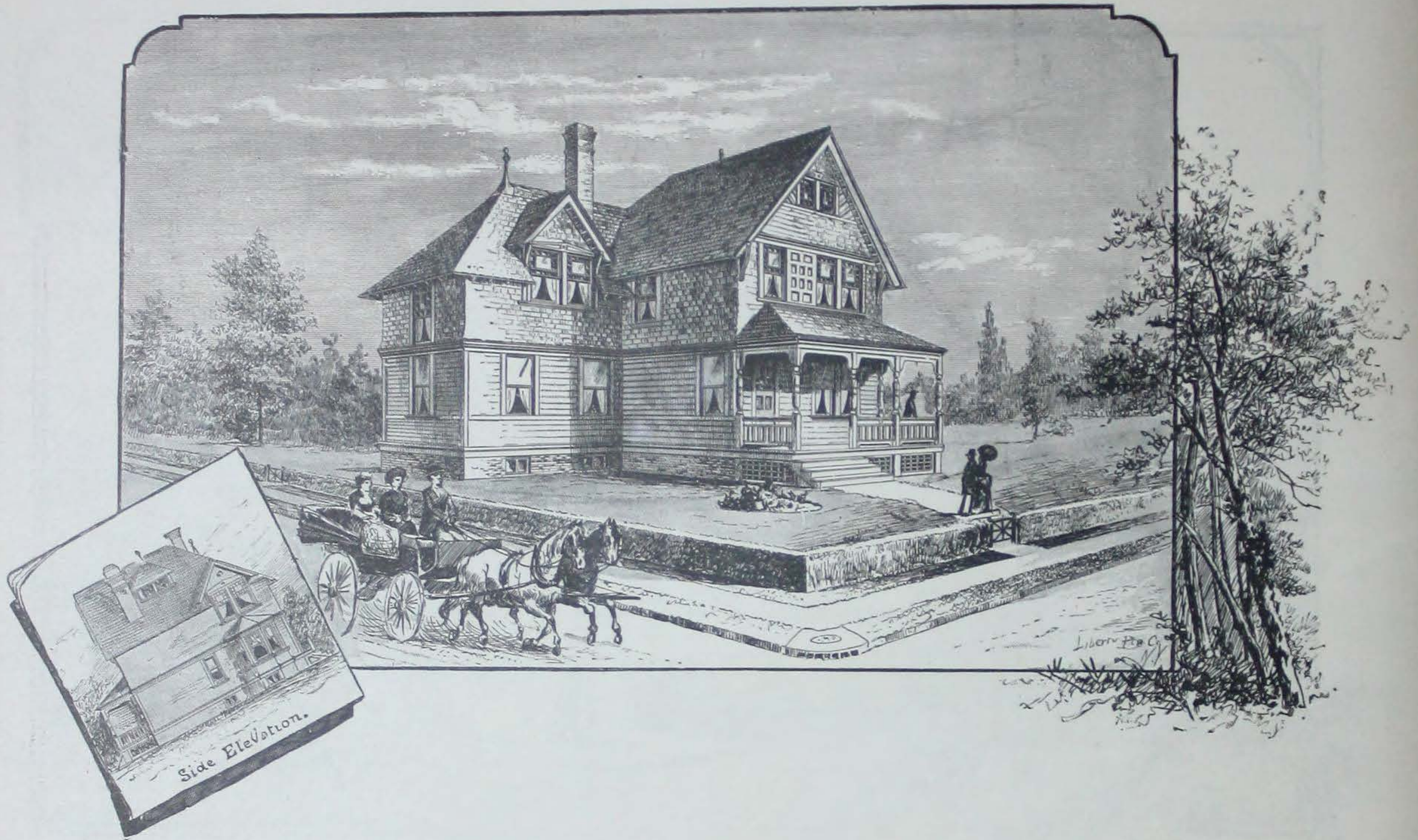
This is a story and a half house, and can be built in many parts of the country for less than our estimate.



FIRST FLOOR. NO. 331



SECOND FLOOR. NO. 331



DESIGN No. 332. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 332

SIZE OF STRUCTURE: Front, 20 ft.; including side wing, 36 ft. Side, 32 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft., 6 in.

MATERIALS. Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Roof, shingles.

COST \$2,000, complete, except mantels.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—Large rooms, and a large bay-window in the dining-room.

Sliding doors connect the parlor and dining-room. Double folding doors between the hall and the parlor.

Three bed-rooms and a bath-room in second story, the front room having a large alcove. This alcove can be made a bed-room 6 ft., 6 in., x 7 ft., if preferred.

One good bed-room is finished in the attic.

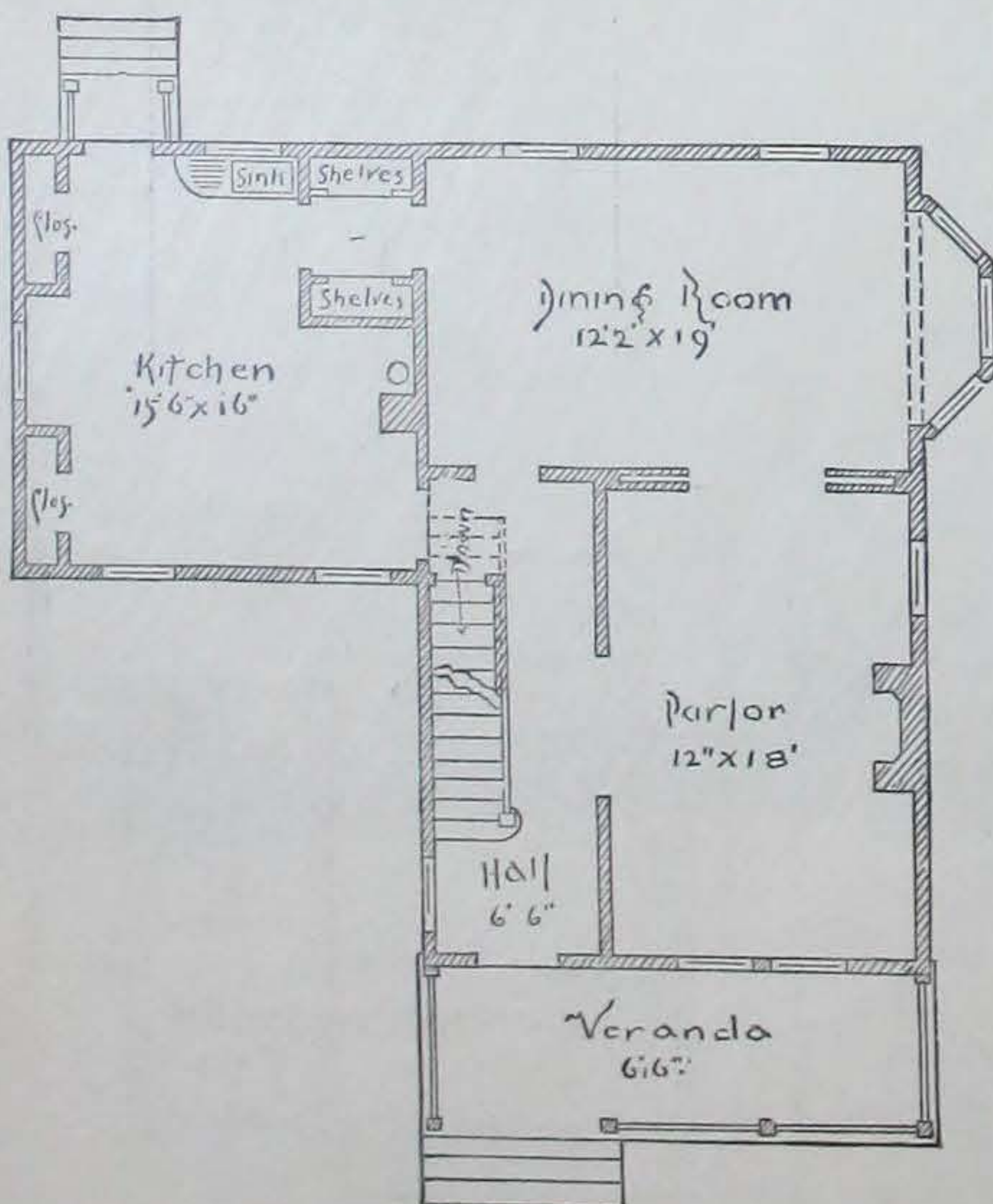
Cellar under the whole house.

NOTES

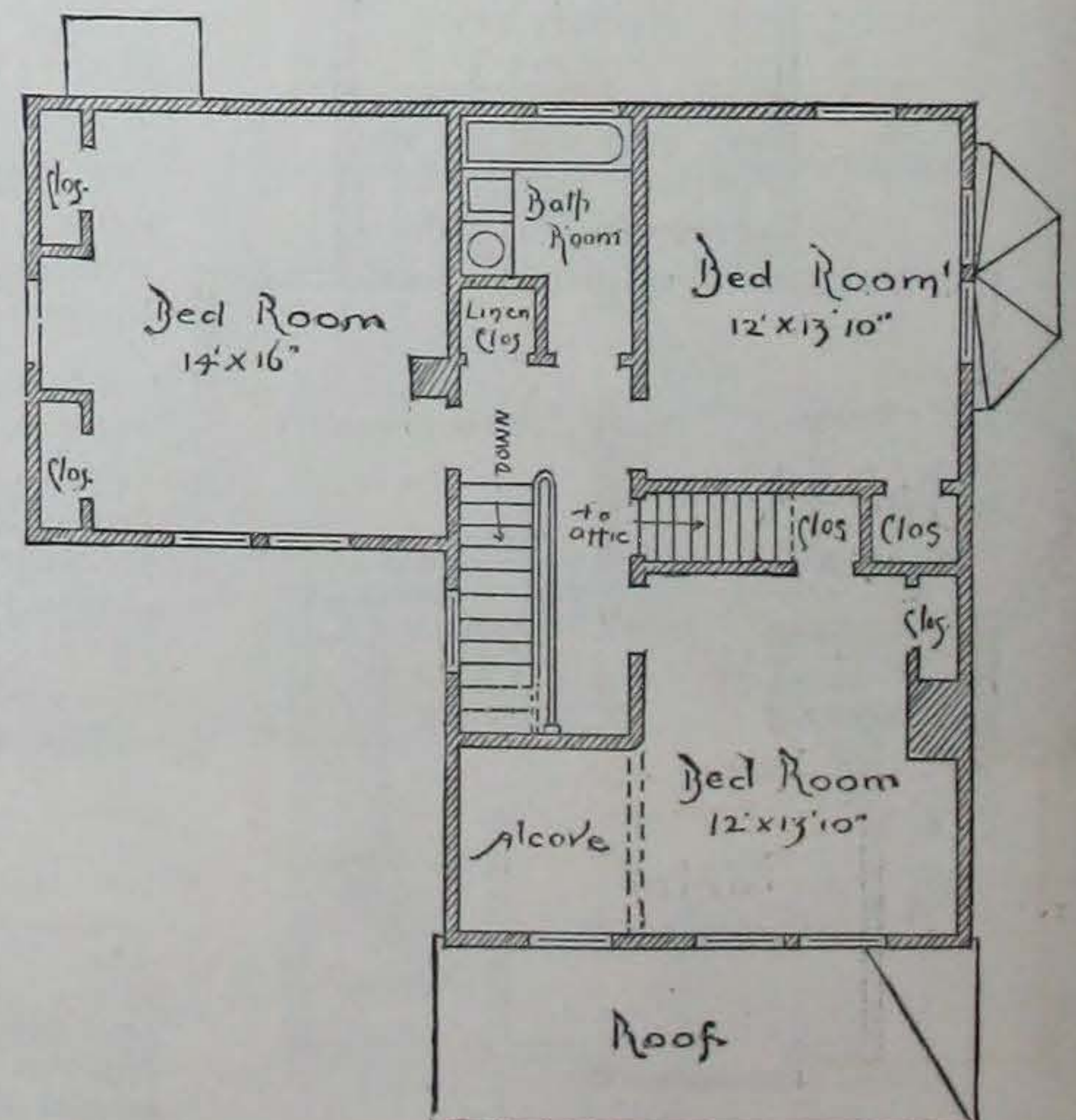
The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.



FIRST FLOOR, NO. 332



SECOND FLOOR, NO. 332.

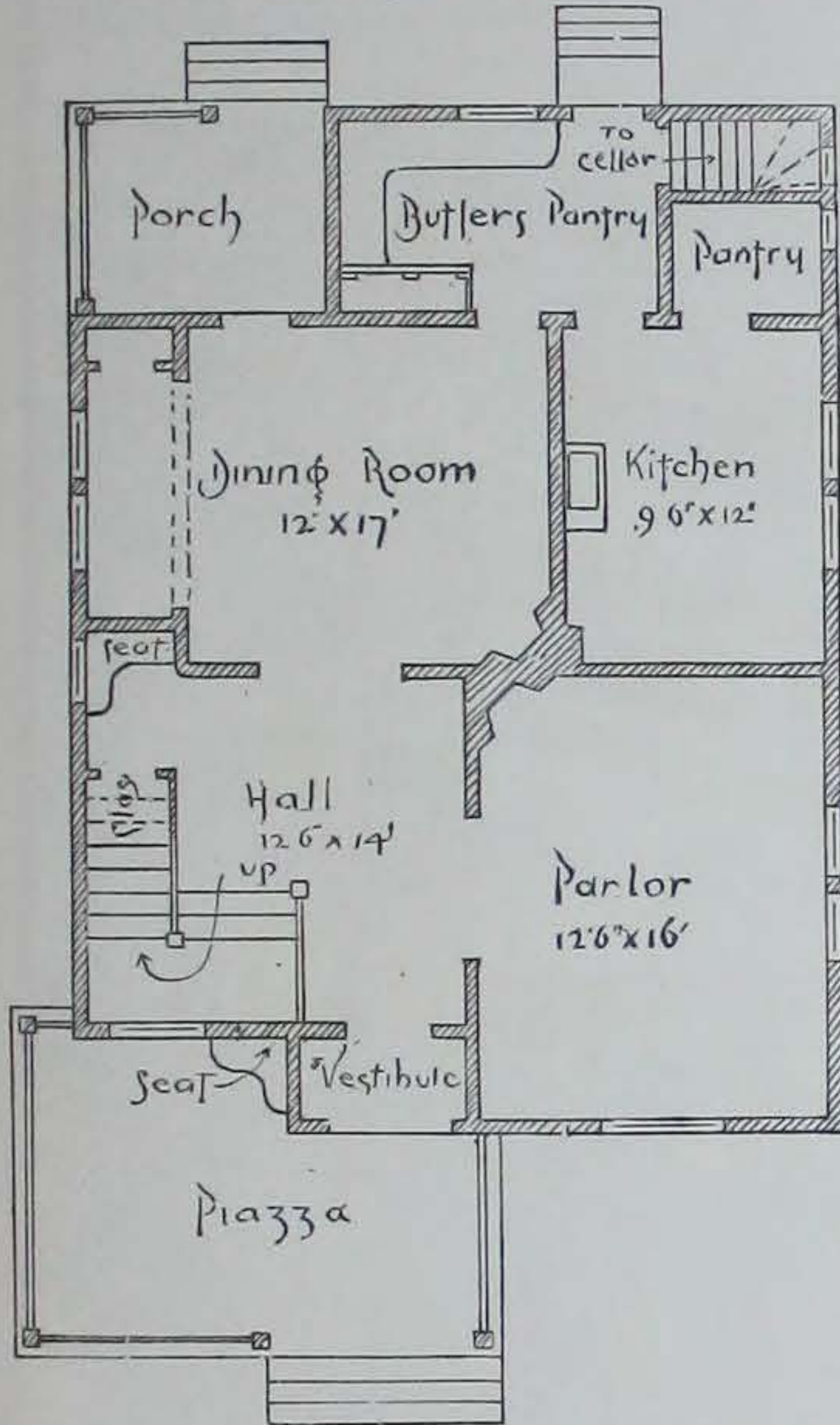
DESCRIPTION OF DESIGN NUMBER 333

SEE FRONTISPIECE FOR EXTERIOR VIEW

SIZE OF STRUCTURE: Front, 30 ft., including projection of front veranda. Side, 45 ft., including front veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft., 6 in.; Second Story, 8 ft., 6 in.



FIRST FLOOR. NO. 333

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Roof, shingles.

COST: \$2,600, complete, except mantels and kitchen range.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and care-

ful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—For the exterior appearance of this house, see the colored frontispiece.

Large, fine hall and staircase. Under the upper part of the staircase a nook is formed, with seat and window.

The hall is connected with the parlor and with the dining-room by double folding doors.

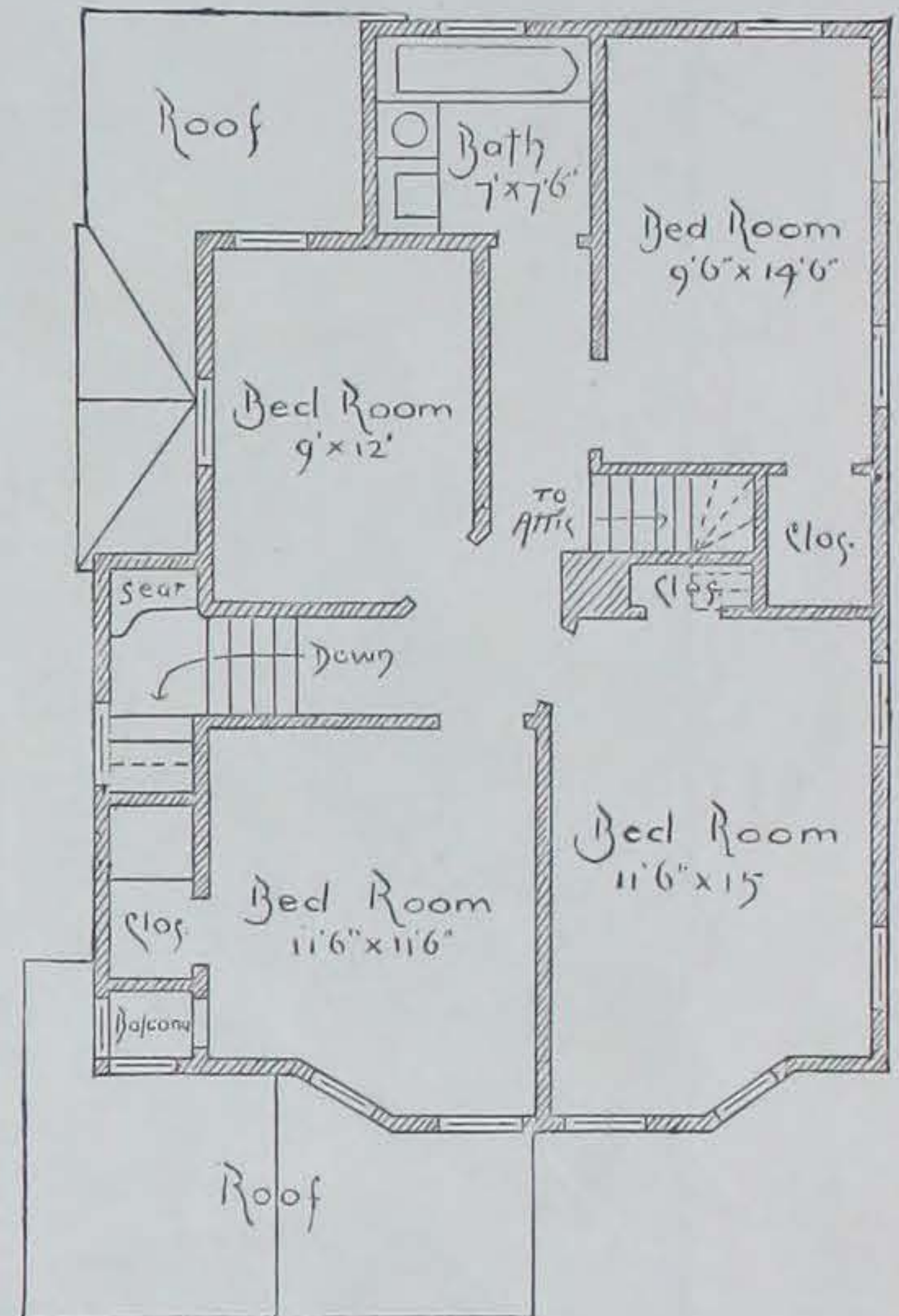
Very large butler's pantry between the dining-room and kitchen, and a large store pantry for the kitchen.

Fire-place in dining-room and parlor.

Cellar under the whole house.

Two good rooms can be finished in the attic.

A window and a recessed seat on the upper landing—a pretty nook for waiting or reading. Small and inexpensive features like this often make the modern house, although moderate in size, more convenient and comfortable than many of its pretentious neighbors.



SECOND FLOOR. NO. 333

DESCRIPTION OF DESIGN NUMBER 334

SEE FRONTISPIECE FOR EXTERIOR VIEW

SIZE OF STRUCTURE: Front, 30 ft. Side, 49 ft., including front veranda.

SIZE OF ROOMS: See floor plans.

COST: \$2,800, complete, except mantels and kitchen range.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of

modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

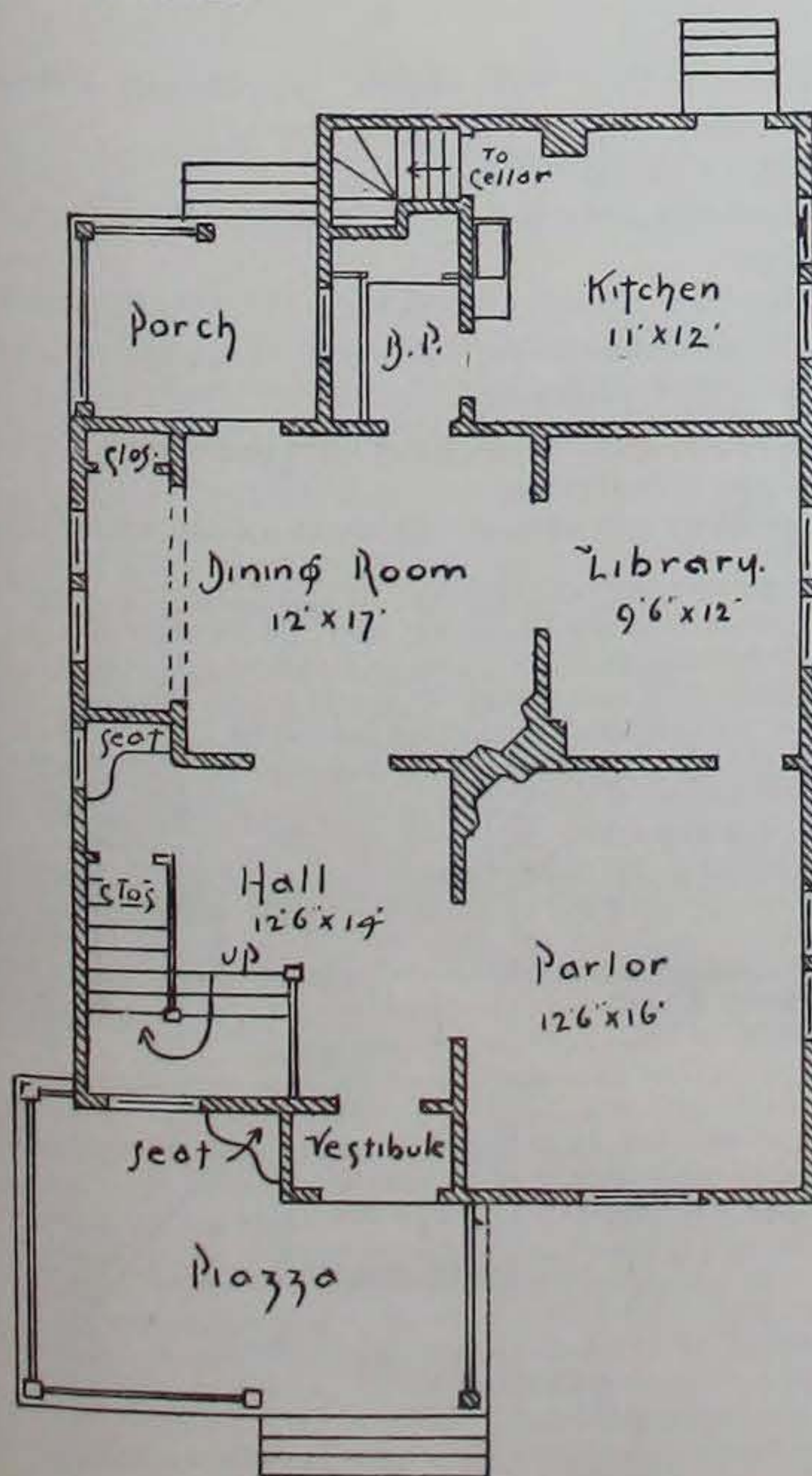
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—The heights of stories, materials, &c., are the same as for those of design No. 333, described above; this is a modification of that design having the rear extension enlarged to make a kitchen and pantry, and an additional bed-room in the second story.

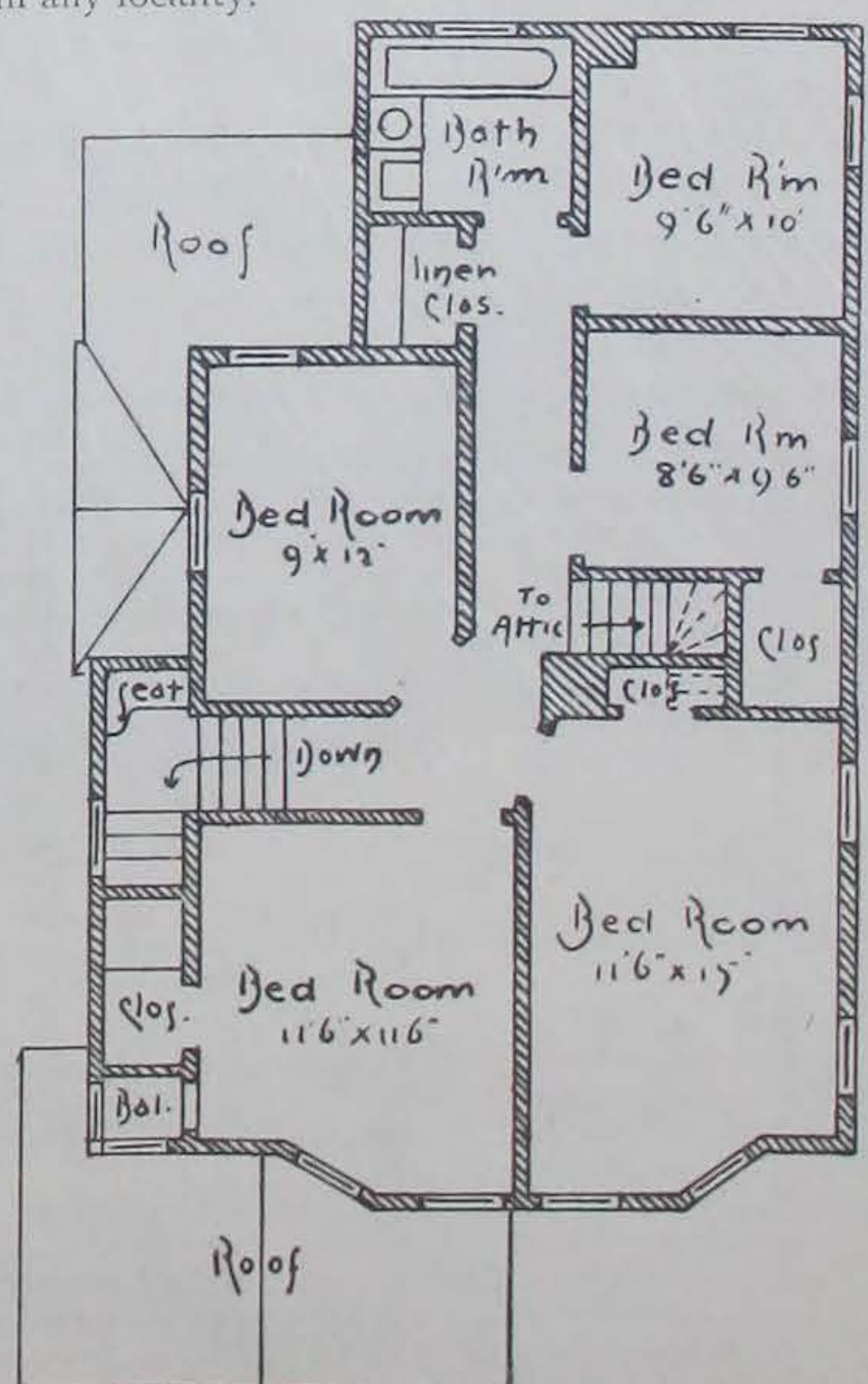
On the first floor the rooms and the hall all connect and can be thrown together. A spacious house for entertaining.

The front porch is 10 ft. wide at the widest point; being low it affords a shady and cool retreat.

Cellar under the whole house.



FIRST FLOOR. NO. 334



SECOND FLOOR. NO. 334



DESIGN No. 335. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 335

SIZE OF STRUCTURE: Front, 32 ft., 6 in. Side, 30 ft., 6 in.

SIZE OF ROOMS: See floor plans.

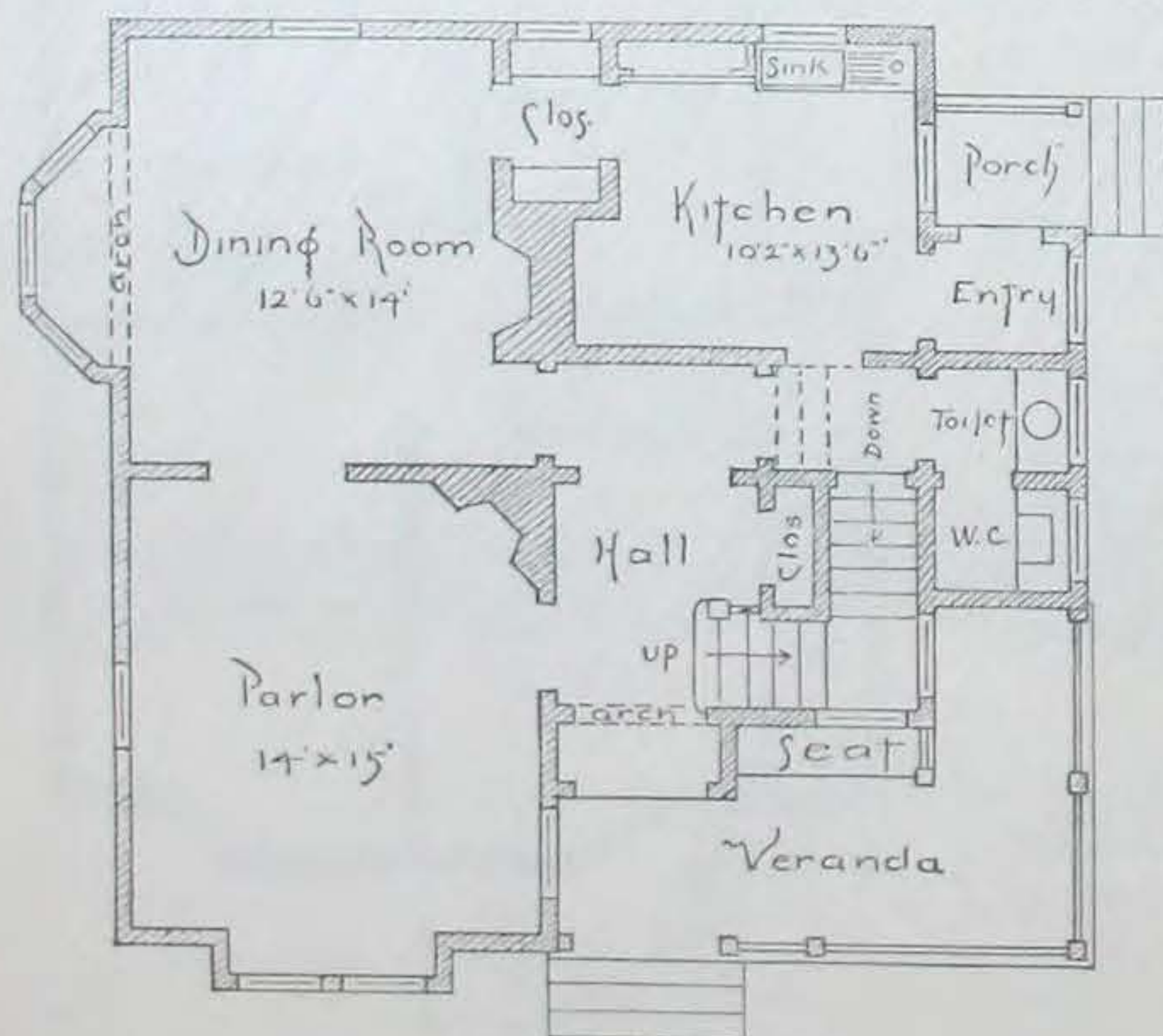
HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft.; Second Story, 8 ft., 6 in.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, clapboards; Roof, shingles.

COST: \$2,500, complete, except kitchen range.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—Toilet and water-closet on the ground floor, bath and wash-basin on the second floor.



FIRST FLOOR. NO. 335

It will be noticed that all this plumbing is kept out of the main part of the house, yet it could not be located more conveniently. It is completely out of the way and out of notice on the ground floor, as the small side-hall must first be entered through a door.

The kitchen also, and the

cellar-stairway are entered from this side hall, separating them thoroughly from the living rooms.

All the plumbing is in direct lines.

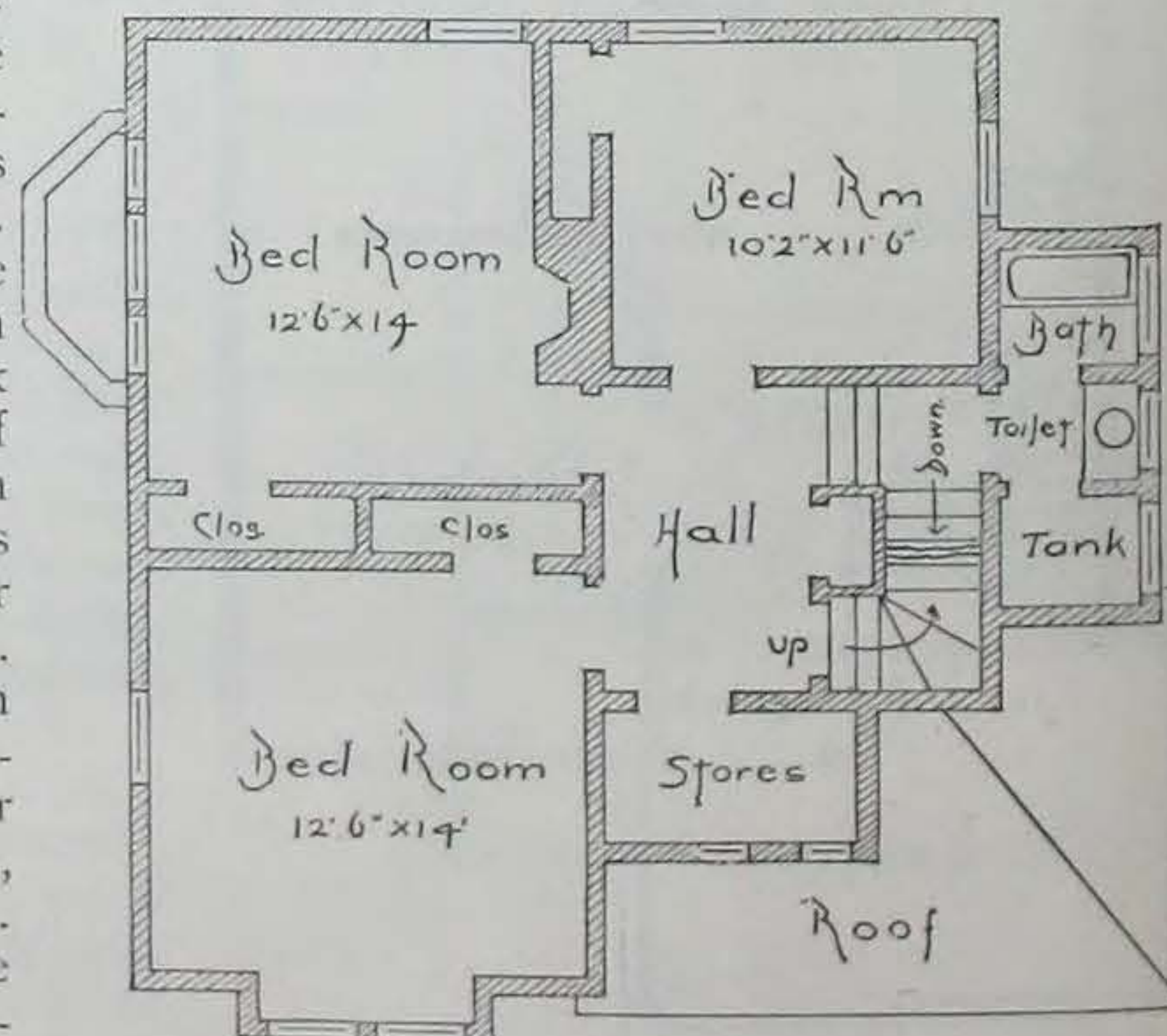
The intention is to use curtains only between hall and parlor and between parlor and dining-room.

The flue for the parlor fire-place is connected with the kitchen and dining-room chimney by a galvanized iron pipe, saving the expense of carrying up and topping out another chimney.

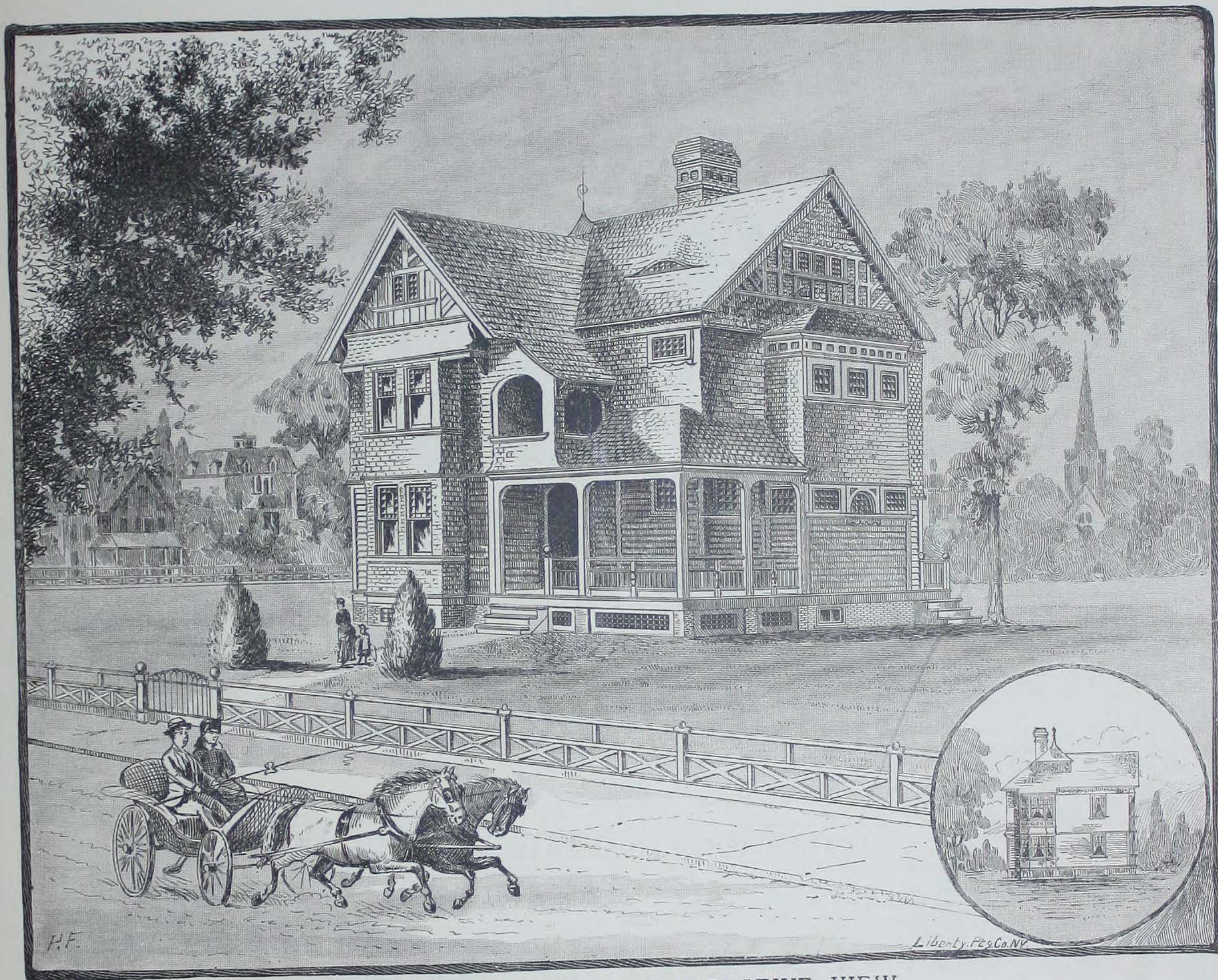
The stairway is an easy and pleasant one with two platform landings, and lighted by stained glass windows.

The space between the ceiling of second story and the roof is well ventilated; although not large enough for bedrooms, it makes good storage room.

Cellar under the hall and kitchen enclosed by brick walls; the rest of the house is set on brick piers. This was designed for a seaside cottage. We will furnish specifications calling for walls under the whole house, if this is desired. An entrance to the cellar from the outside is provided.



SECOND FLOOR. NO. 335



DESIGN NUMBER 336—PERSPECTIVE VIEW

COST, SAME AS DESIGN No. 335

The floor plans for this Design are same as those of Design No. 335, shown on the preceding page.

LOW COST AND SUBSTANTIAL CONSTRUCTION

In the army, in mining towns and in the oil regions, methods of constructing small houses cheaply and substantially have been demonstrated over and over again. That the best of such structures were substantial is proved by the fact that many of them are still standing and in use after many years of service.

These structures generally were atrocious in appearance. We do not suggest for a moment that their appearance be reproduced. We do say, however, that they demonstrated a method of framing and enclosing, which can be utilized in building tasteful small houses at a saving of fully one-third the usual cost.

The working drawings and specifications of designs Nos. 312 and 313, views and plans of which are shown in another part of this book, have been prepared for this method of construction, utilizing also other economies that are briefly described below.

Foundations.—The foundations may be walls, piers or posts. We recommend the latter because they are substantial and they are the most economical. It must be remembered that low cost is the object to be kept in view.

Plank Framing.—We can think of no better term than this, although it does not fully satisfy us. This manner of framing does away with the regular timber or studded frame, thus economizing in material, and greatly in the matter of labor.

The sills for the first floor joists are formed by spiking two joists together, and nailing a strip to the lower inside edge to notch the joists on. The joists are also secured by spiking through the sill into the ends of the joists with large spikes. The sills are laid on the foundations and spiked to the posts if such are used. Then the floor is laid, nailing well. Next the corner boards are nailed together and set up plumb and braced. Then raise the second floor joists on temporary props, cut to the height of the story, a floor joist forming the plate or girt, and through it spiking into the ends of the joists. Then proceed to side up vertically with inch boards, running as high as it is proposed to carry the walls, from the corner boards around until the plank walls are complete. Put on plates and nail the upper ends of planks to them. Cut out window and door openings, set window frames, put on rosin sized sheathing paper and corner strips. Then weather board and shingle in the usual way. Raise the roof, being careful to keep the plates straight.

Inside put on another sheathing of rosin sized paper, nail furring lath $1 \times 1\frac{1}{2}$ inches over joints of boards, then lath as for plastering, spacing them, however, double as far apart as for plastering.

Observe particularly to cut joints carefully and nail well. The liberal use of paper (which is inexpensive) makes such a structure warm. Nailing well makes it strong.

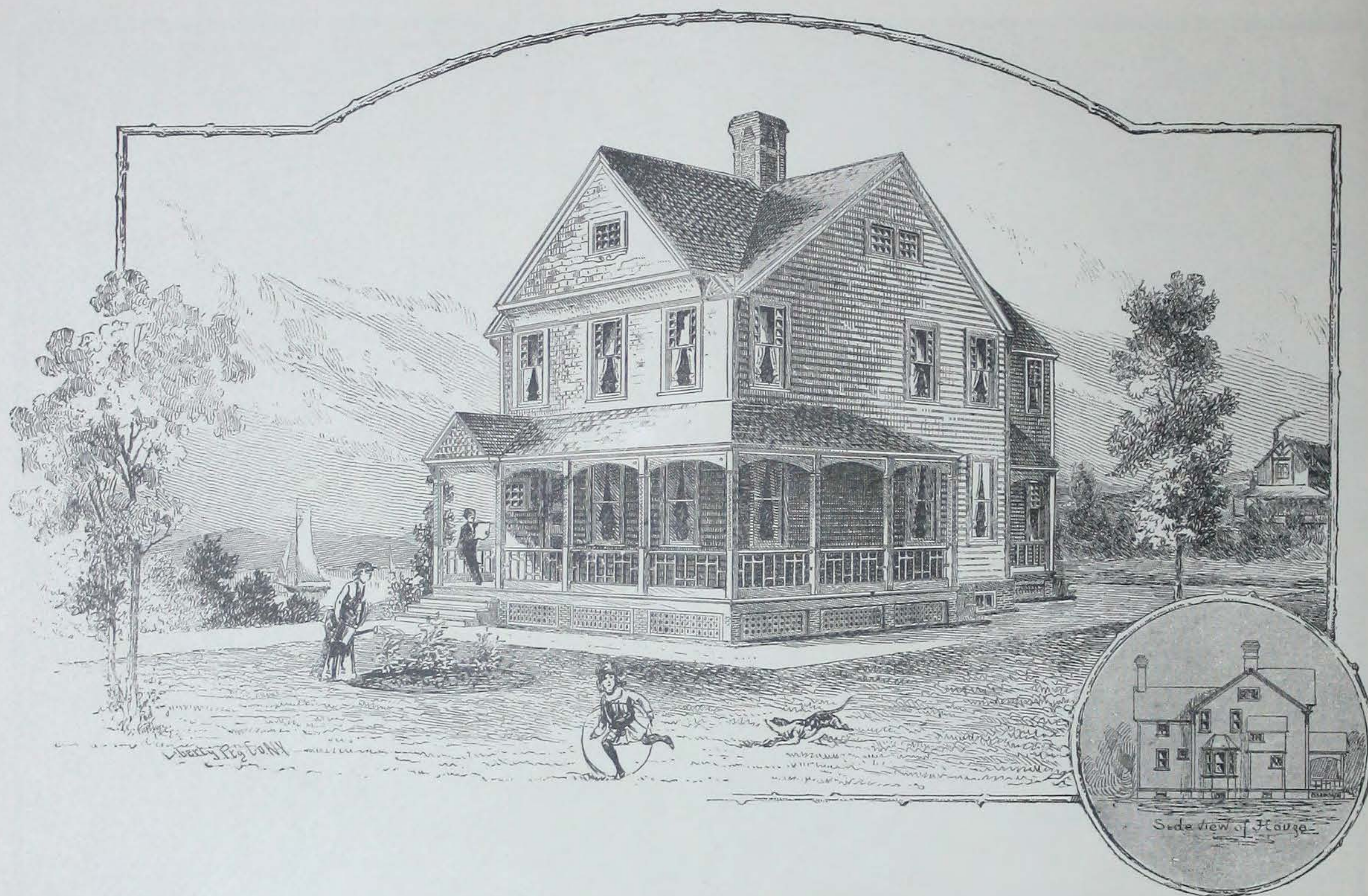
Plaster Board.—For walls and ceilings in place of plaster. This is a very strong manilla paper, and is pasted or cemented (not tacked) on to common plastering lath, which should be planed on one side to insure a smooth surface. But half the number of lath required for plaster are necessary. Unskilled labor can apply it. It is justly claimed for this finish that the expense is light as compared with plaster (just the point for us); that there is no cracking; that it is impervious to dampness; that it is warmer in winter and cooler in summer than plaster; that it does not shrink and is easily repaired; that it can be applied at any season of the year. Its color is salmon and its natural appearance is good; wall paper can be applied to it the same as to plastered walls.

The reader will note that we now have three layers of paper in the walls of the house. Paper is one of the best non-conductors of heat and cold. It is well known that a half-dozen newspapers are as good as a blanket; it may be said as well that they will keep out as much cold as a plaster wall.

Paper Roofs.—This is heavy manilla paper, of extra weight and quality and painted on one side. It is tacked on a foundation of matched boards (the best) or of common mill boards laid edge to edge. It requires no battens, and looks very neat. It withstands weather and winds, does not corrode, and does not injure the rain water. Its cost is about one-half that of shingles.

Many people who are "set in their ways" and who may think well of all other suggestions in this article, will draw the line here. They will have no paper roof. We confess to a feeling of that sort ourselves. We like the appearance of shingles better, but for strict economy we feel bound to recommend paper roofs of the best quality.

Fire-Clay Flues.—These come in two-foot lengths and are of various diameters, with beveled joints or flanges and stove-holes in the proper places. Strong and tight joints can be made by unskilled laborers. A layer of brick on the floor is all the foundation needed. An ornamental top and top base set on finishes the whole. Experience has proved that these flues are perfectly safe. They cost less than half the cost of brick chimneys.



DESIGN No. 337. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 337

SIZE OF STRUCTURE: Front, 24 ft. Side, 45 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 10 ft.; Second Story, 9 ft.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, clapboards (shingles on the front); Roof, shingles.

COST: \$2,800, complete, except mantels and kitchen range.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Stair-

case, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced, or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Vestibule and large hall with the staircase recessed.

Sliding doors connect hall and parlor, parlor and bedroom, and bedroom and dining-room.

Fire-places in these four principal rooms.

Back stairway to second story.

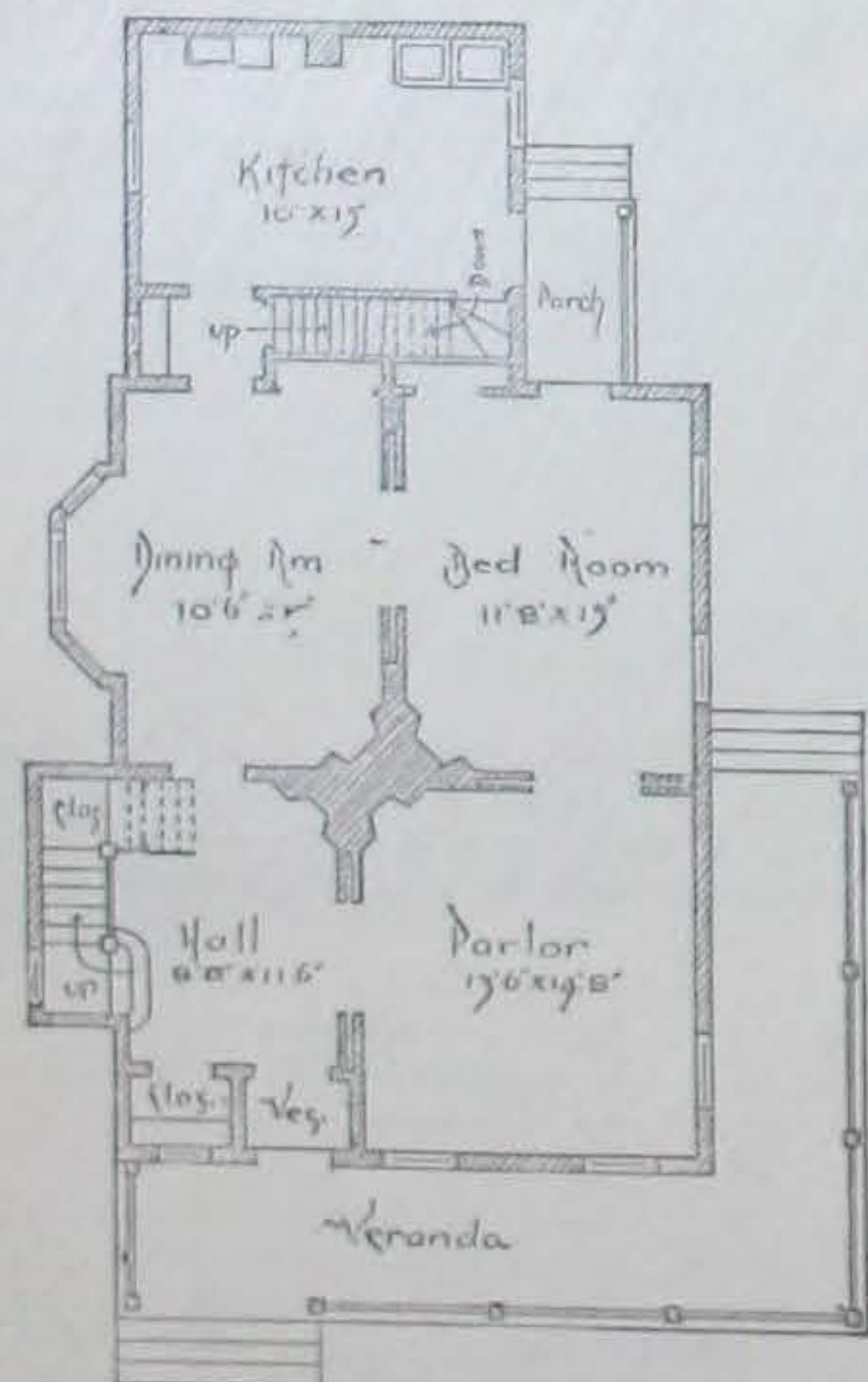
Stationary wash-tubs in the kitchen.

Four bed-rooms, bath-room and a billiard-room in the second story.

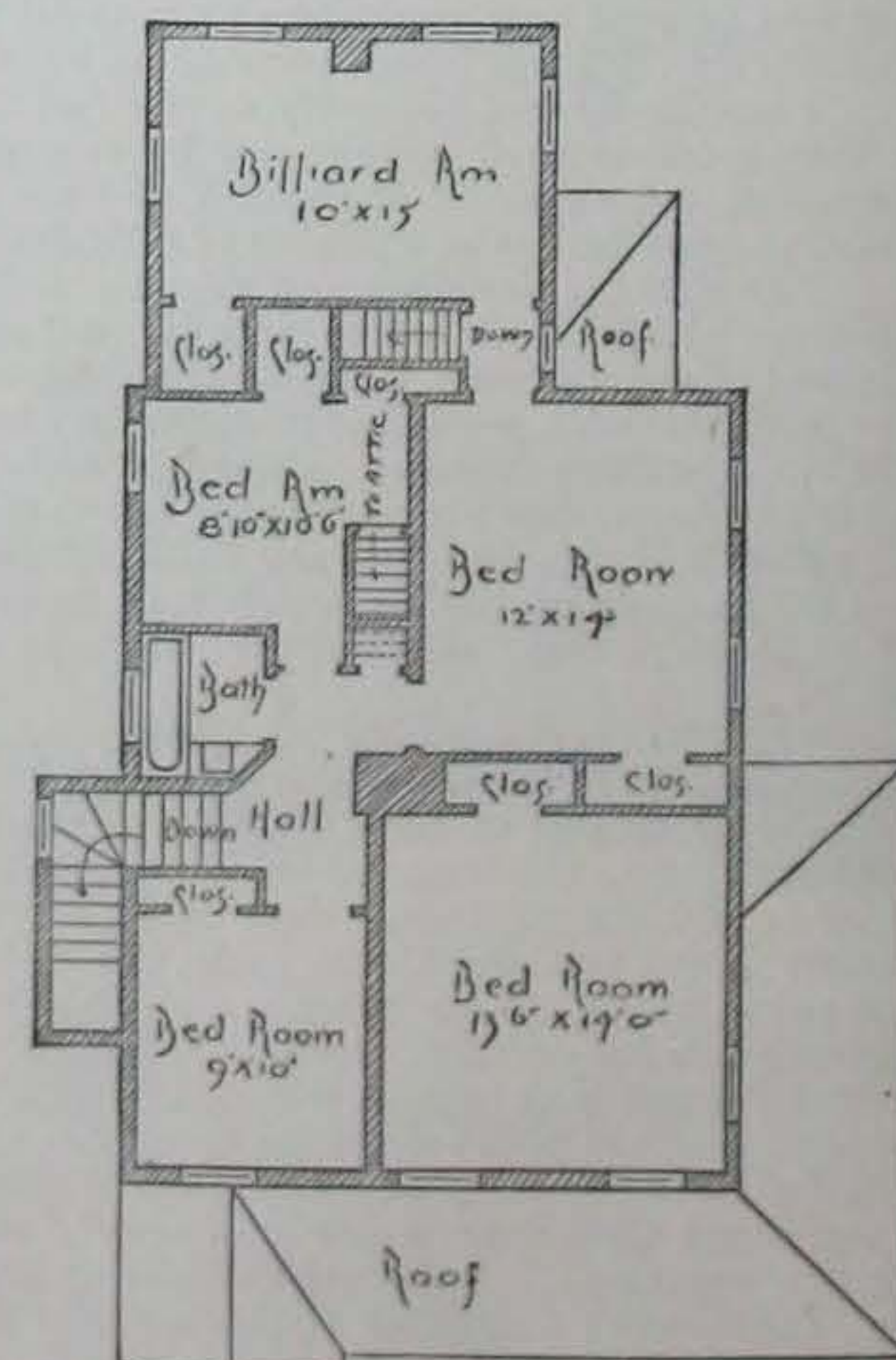
The attic is unfinished, but two or three rooms can be finished there if desired.

Cellar under whole house.

The veranda is 6 ft. wide.



FIRST FLOOR. NO. 337



SECOND FLOOR. NO. 337



DESIGN No. 338. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 338

SIZE OF STRUCTURE: Front, 22 ft., 6 in. Side, 47 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 10 ft.; Second Story, 9 ft.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, clapboards; Gables, panelled; Roof, shingles.

COST: \$2,800, complete, except mantel, kitchen range and heater.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing

beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

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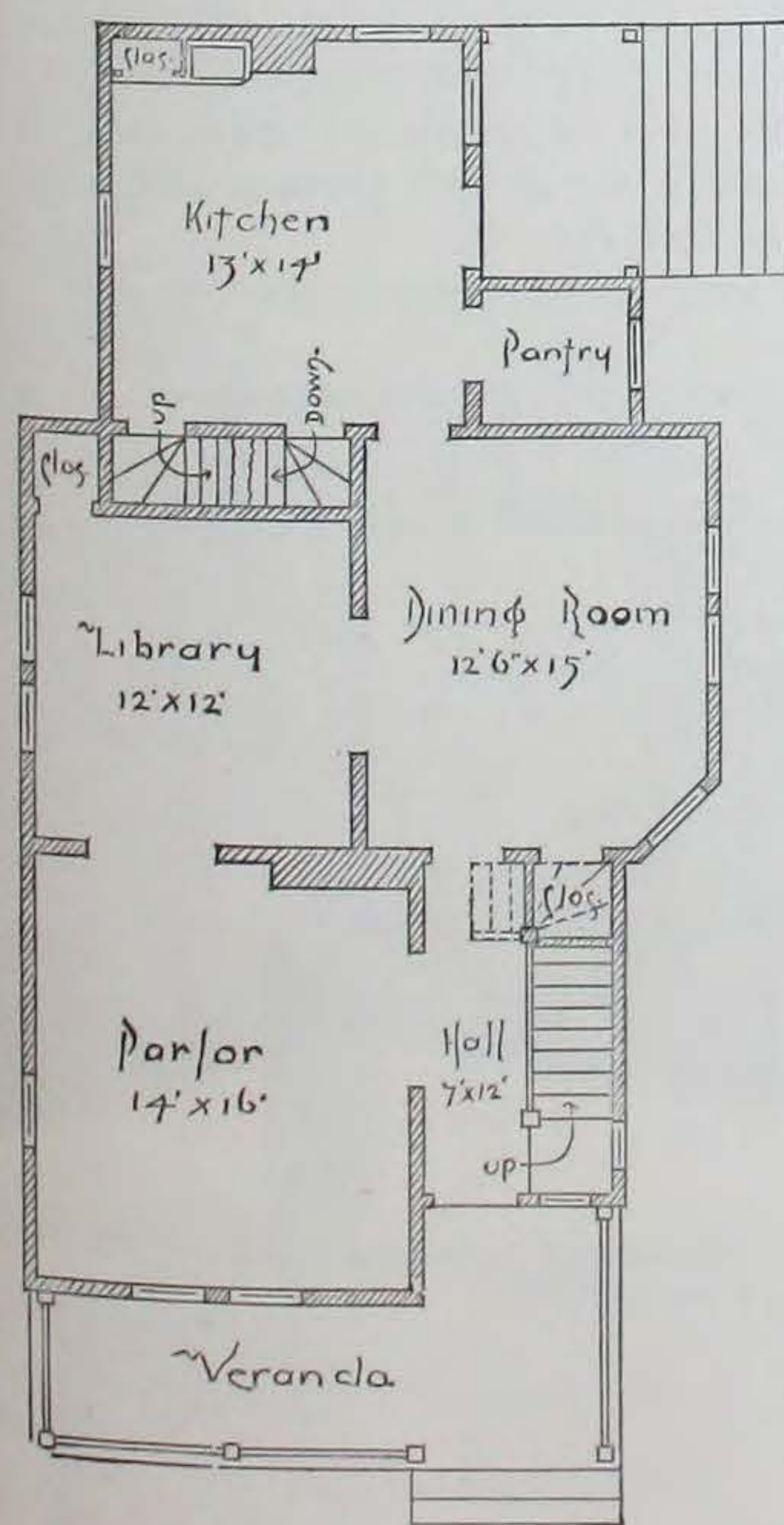
SPECIAL FEATURES.—The principal rooms connect by wide openings for portieres.

A bath-room can be put in where the rear bed-room is for an additional \$150 to \$200.

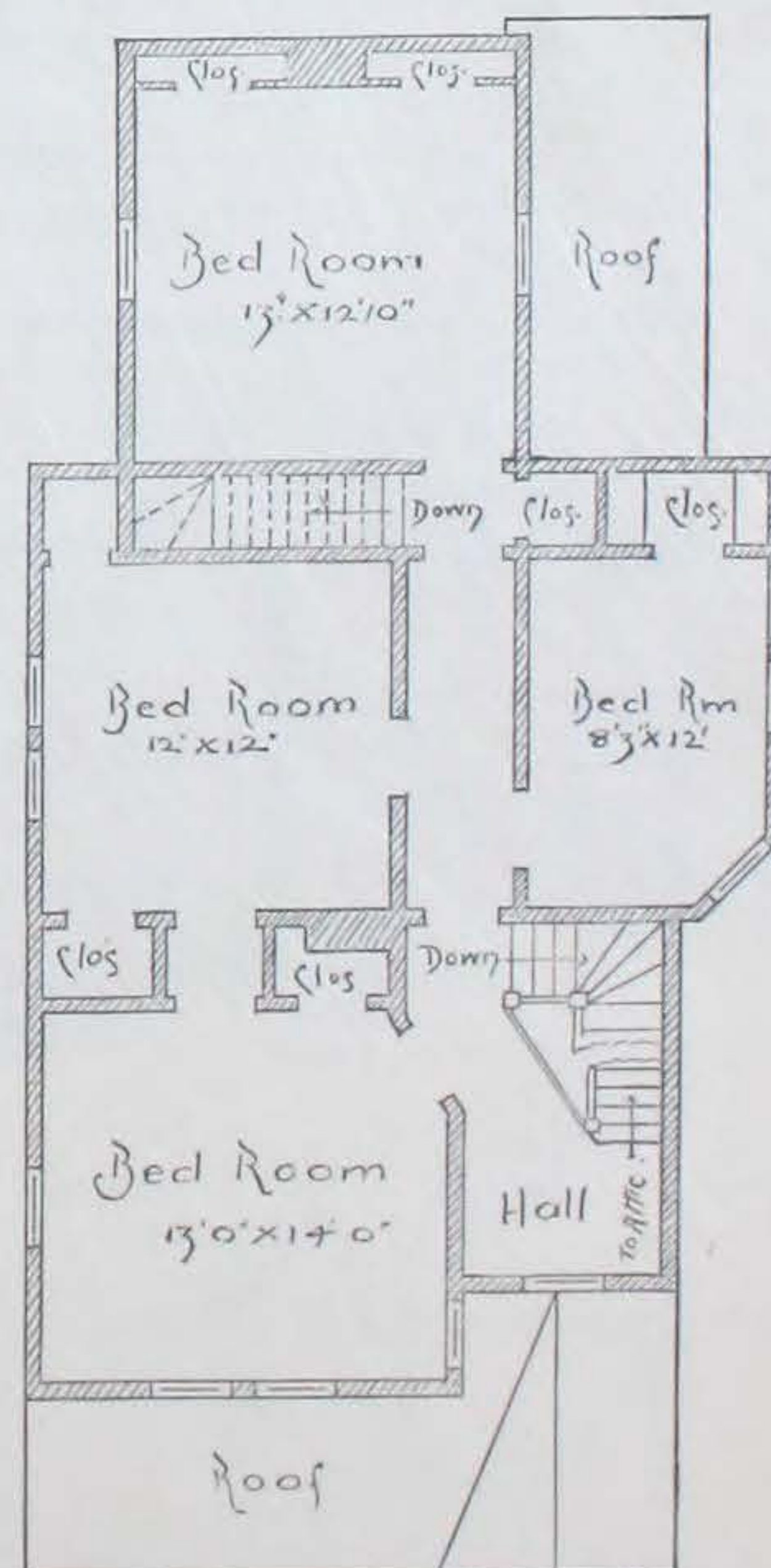
Three rooms can be finished in the attic, if desired. This is not included in our estimate, but the specifications provide for flooring the attic.

A cellar under the whole house with entrance to same from the outside as well as from the kitchen.

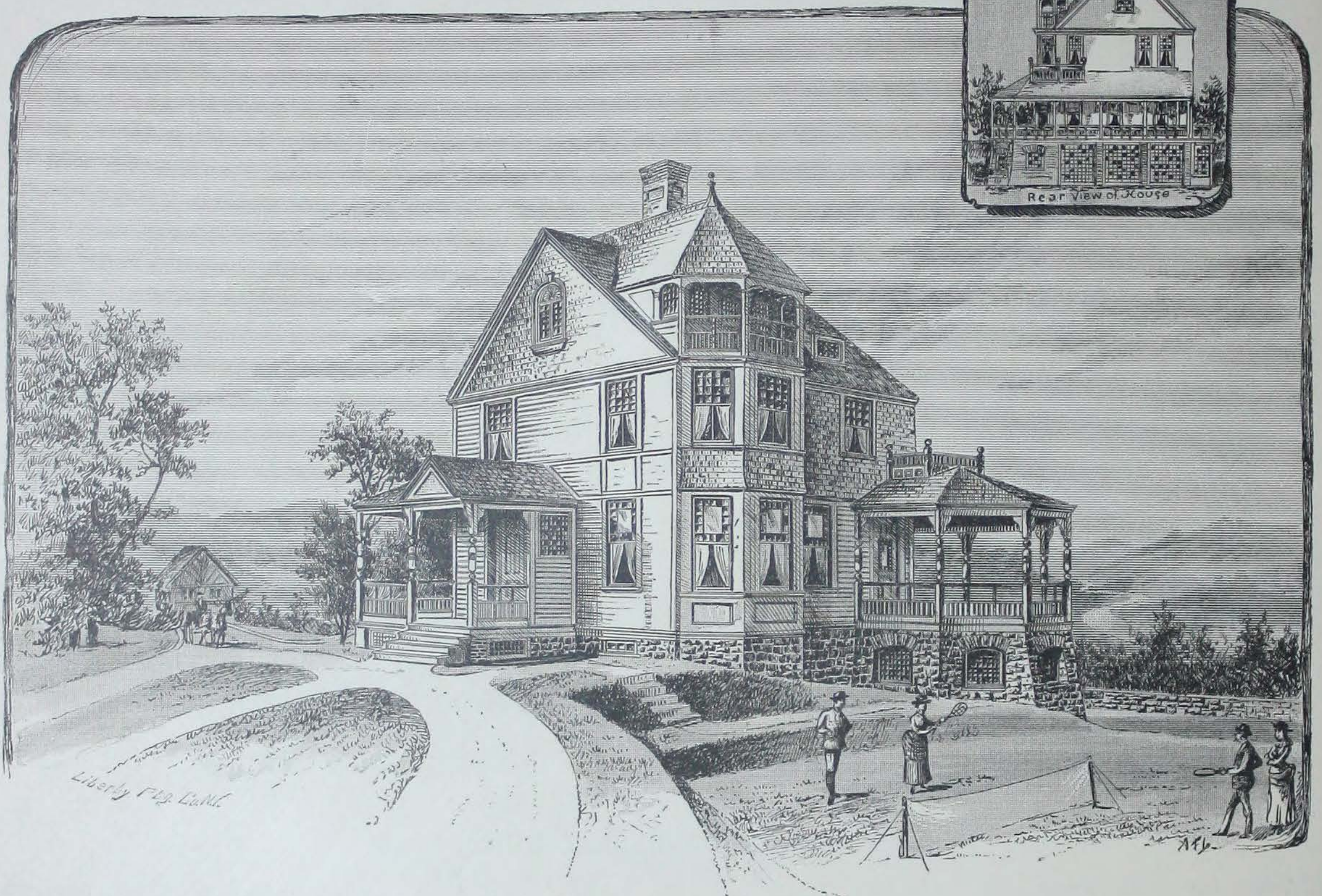
It is designed to heat with a furnace. The proper locations of the pipes and registers are shown on the working plans.



FIRST FLOOR. NO. 338



SECOND FLOOR. NO. 338



DESIGN No. 339. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 339

SIZE OF STRUCTURE: Front, 29 ft., 3 in.; extreme width at rear, including veranda, 42 ft. Side, 28 ft.; extreme depth including verandas, 45 ft.

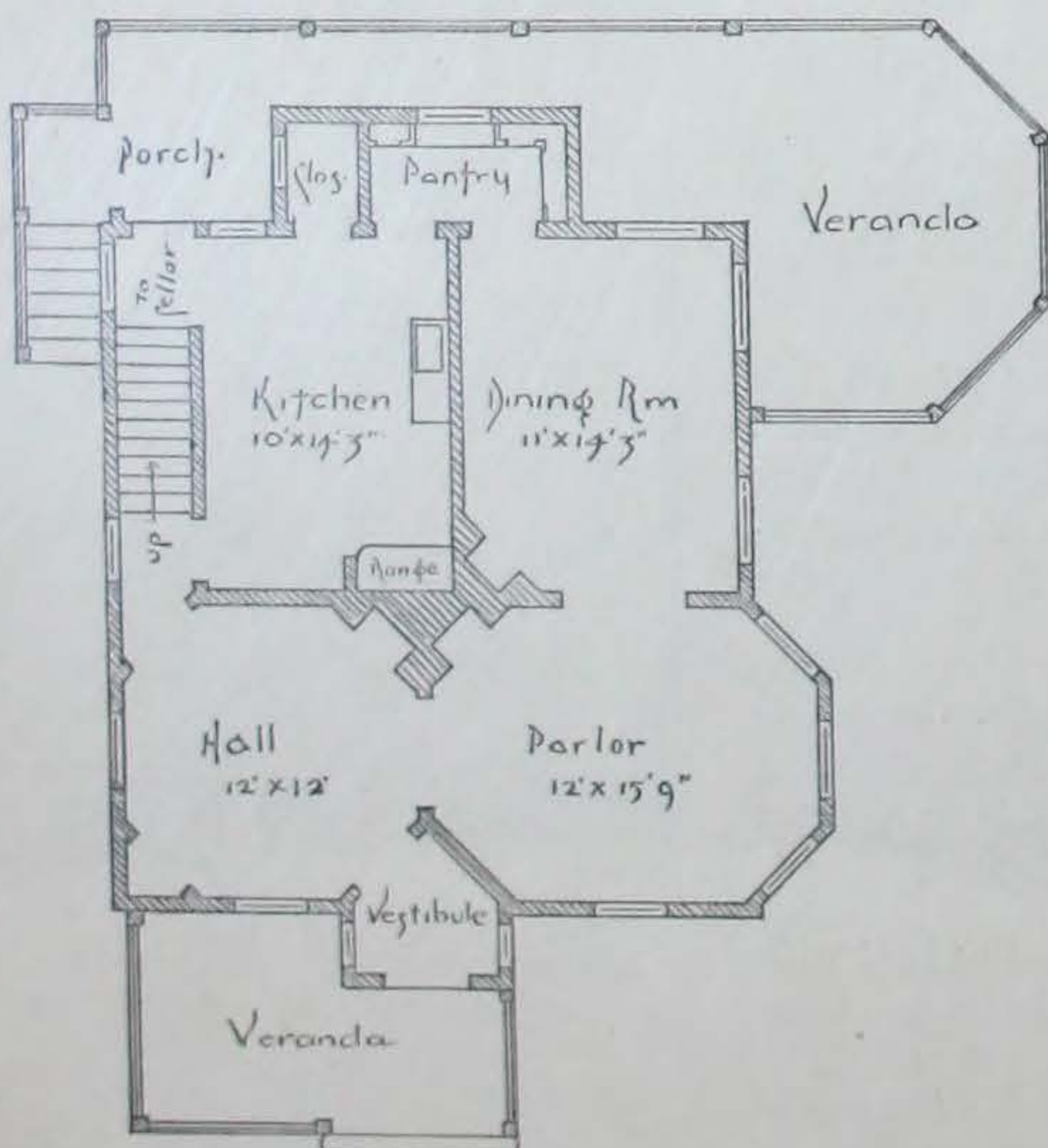
SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 8 ft.; First Story, 9 ft.; Second Story, 8 ft., 6 in.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, clapboards; Gables, shingles; Roof, shingles.

COST: \$2,600, complete, except mantels and kitchen range.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]



FIRST FLOOR. NO. 339

SPECIAL FEATURES.—Designed for a side hill location, and where the best view is from the rear. For the latter reason a spacious veranda is placed at the rear.

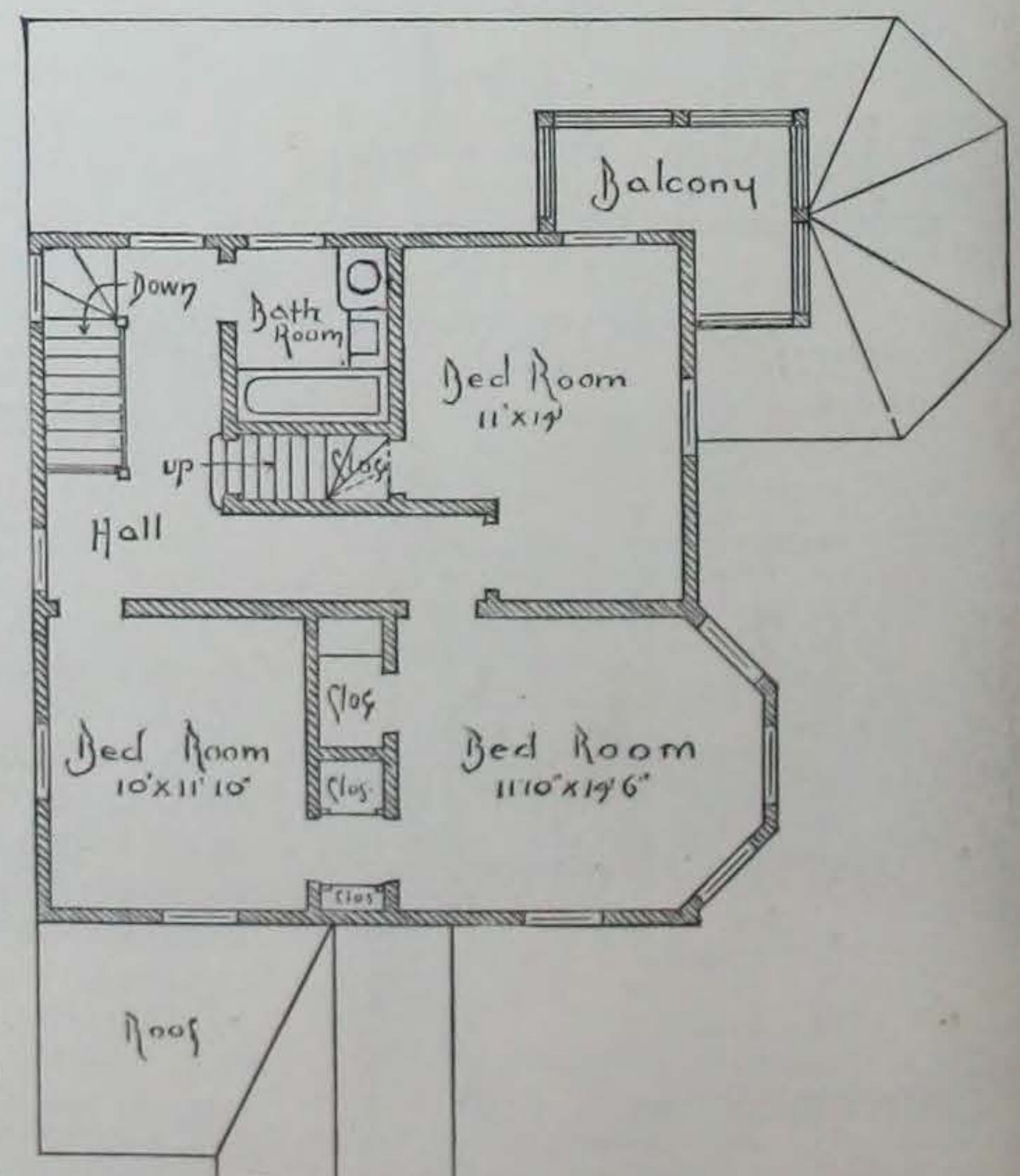
The rear dining-room window is a French casement, going down to the floor, to give access to the veranda.

The hall would be more correctly termed reception-room. It has a fire-place, and is connected with the parlor by a portiere opening. A curtain should be hung at the entrance to the stairway lobby.

The reception-room and parlor practically make one large apartment divided by the curtained opening.

Three bed-rooms in second story, and space for three more in the attic if required.

Cellar under the whole house.



SECOND FLOOR. NO. 339

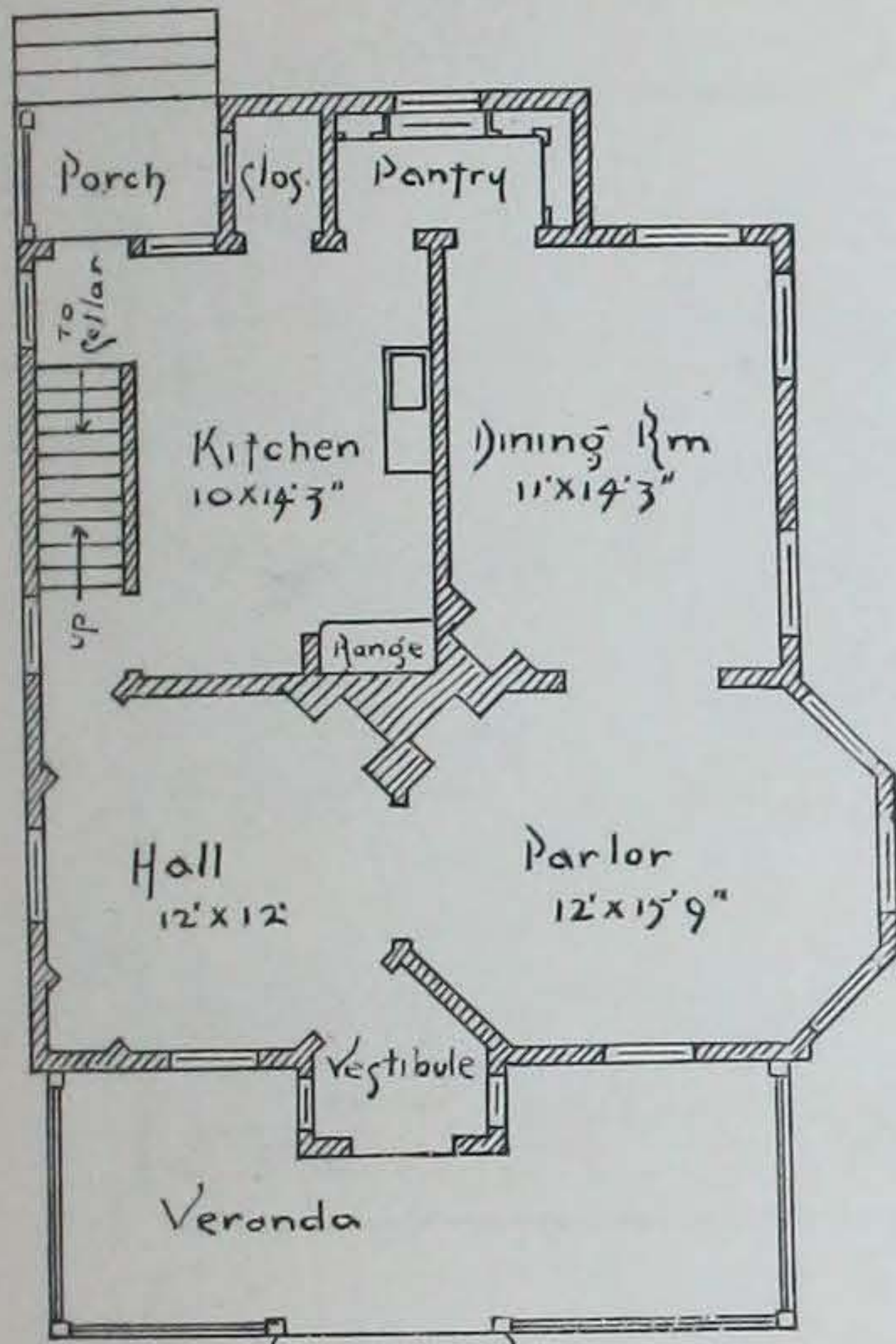
DESCRIPTION OF DESIGN NUMBER 340

SIZE OF STRUCTURE: Front, 29 ft., 3 in. Side, 28 ft.; extreme depth including front veranda and pantry, 41 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft., 6 in.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, clapboards; Gables, shingles; Roof, shingles.



FIRST FLOOR. NO. 340

COST: \$2,300, complete, except mantels and kitchen range.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim.

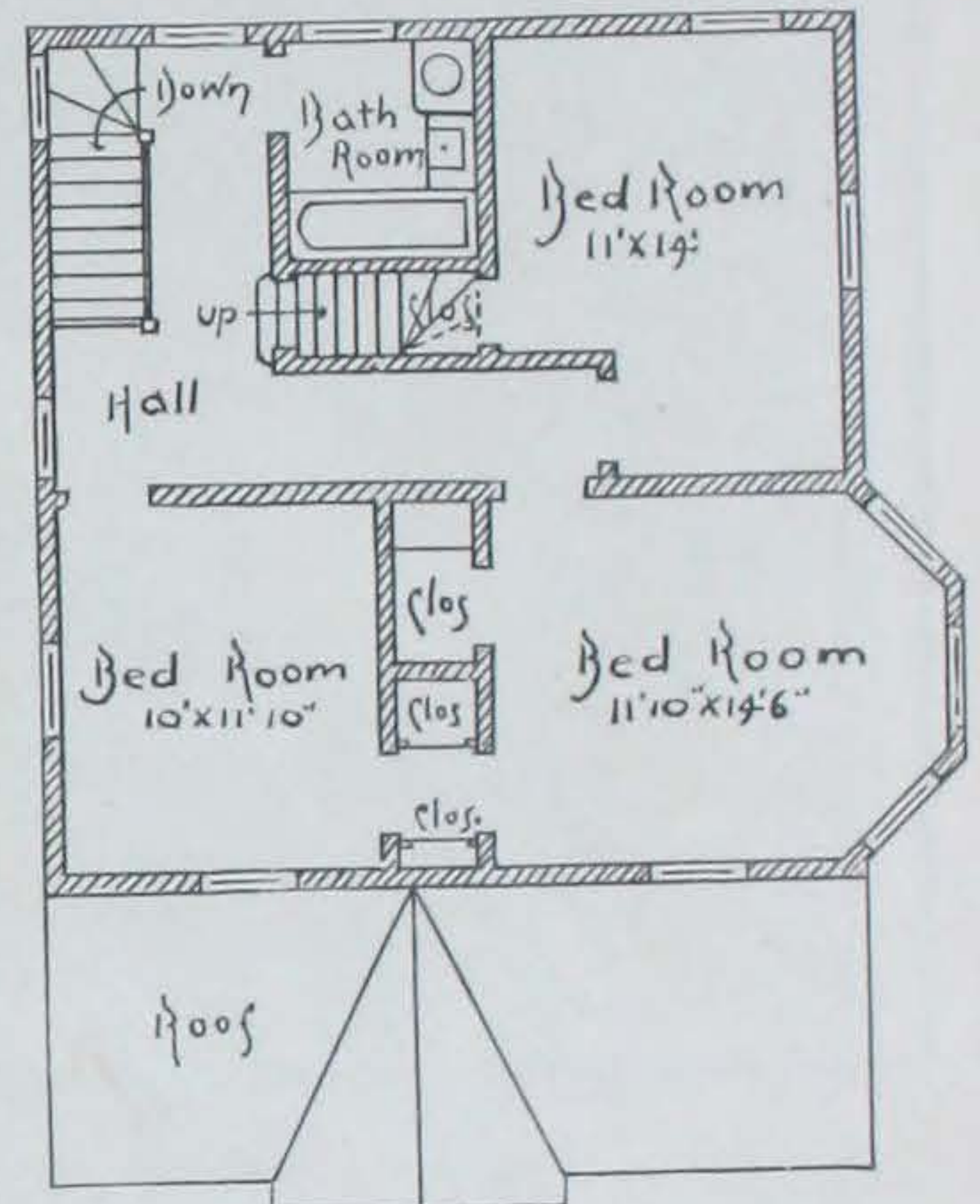
Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Similar in exterior appearance and general design to the preceding one; intended for the ordinary level lot. The rear veranda is left off, and the front veranda is carried across the full width.

Cellar under the whole house.

This house can be heated by a fire-place heater placed in the parlor or the dining-room, or one in both. The heat carried up to second story would warm the two front bed-rooms and the hall; from the hall the radiation would sufficiently warm the other two bed-rooms and the bath-room.



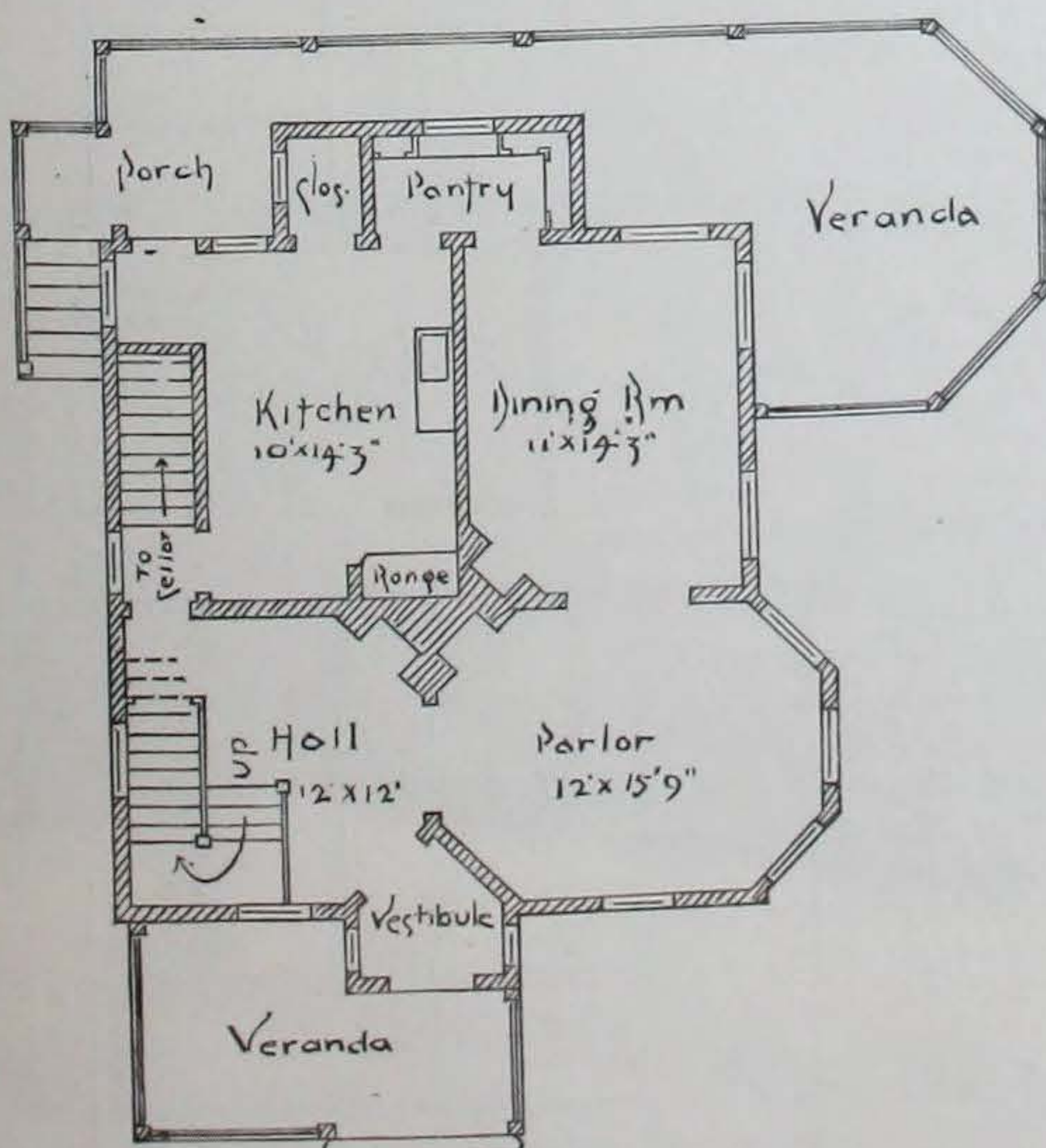
SECOND FLOOR. NO. 340

DESCRIPTION OF DESIGN NUMBER 341

COST: \$2,600, complete, except mantels and kitchen range.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

The same in size and general appearance as design Number 339.

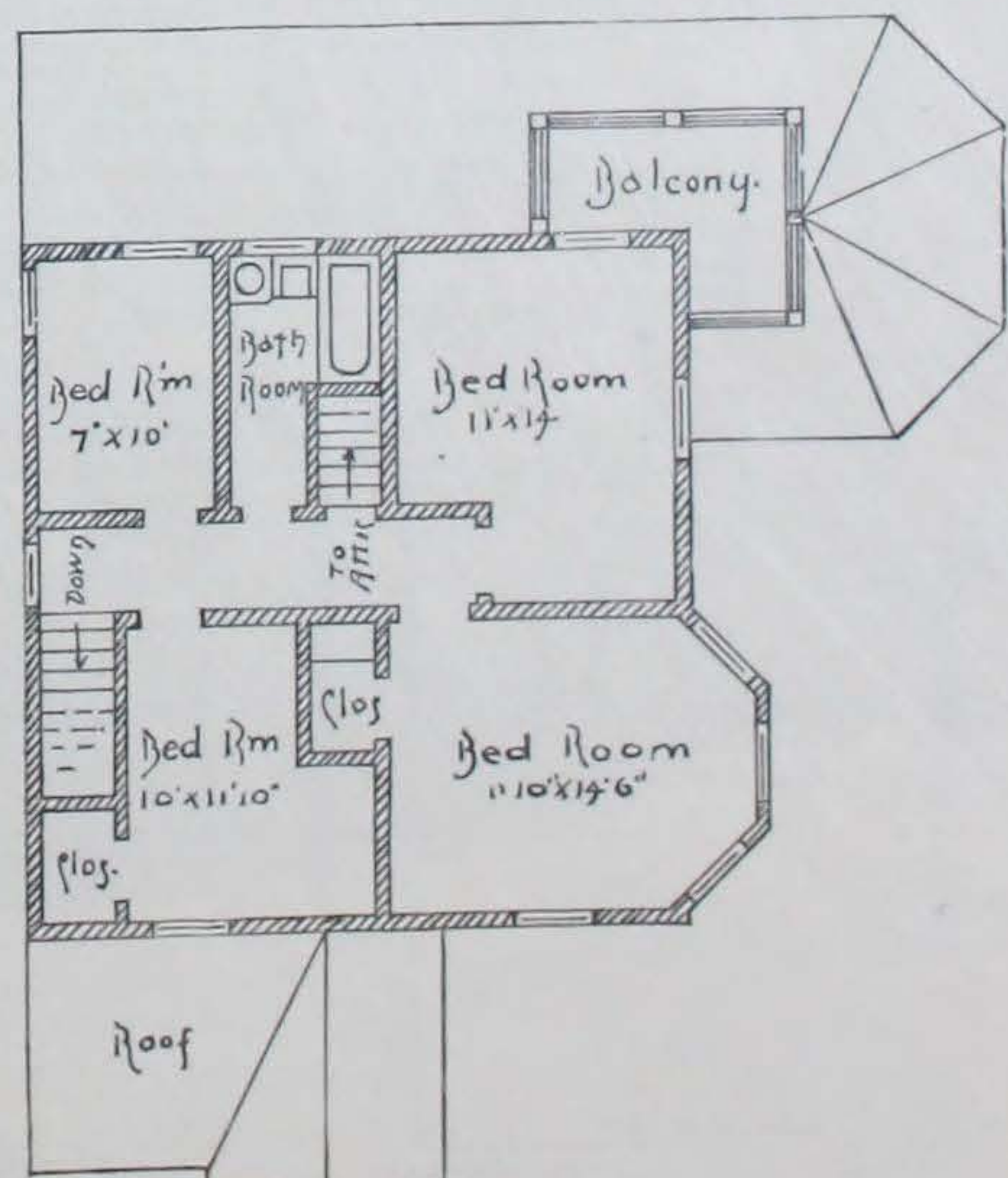


FIRST FLOOR. NO. 341

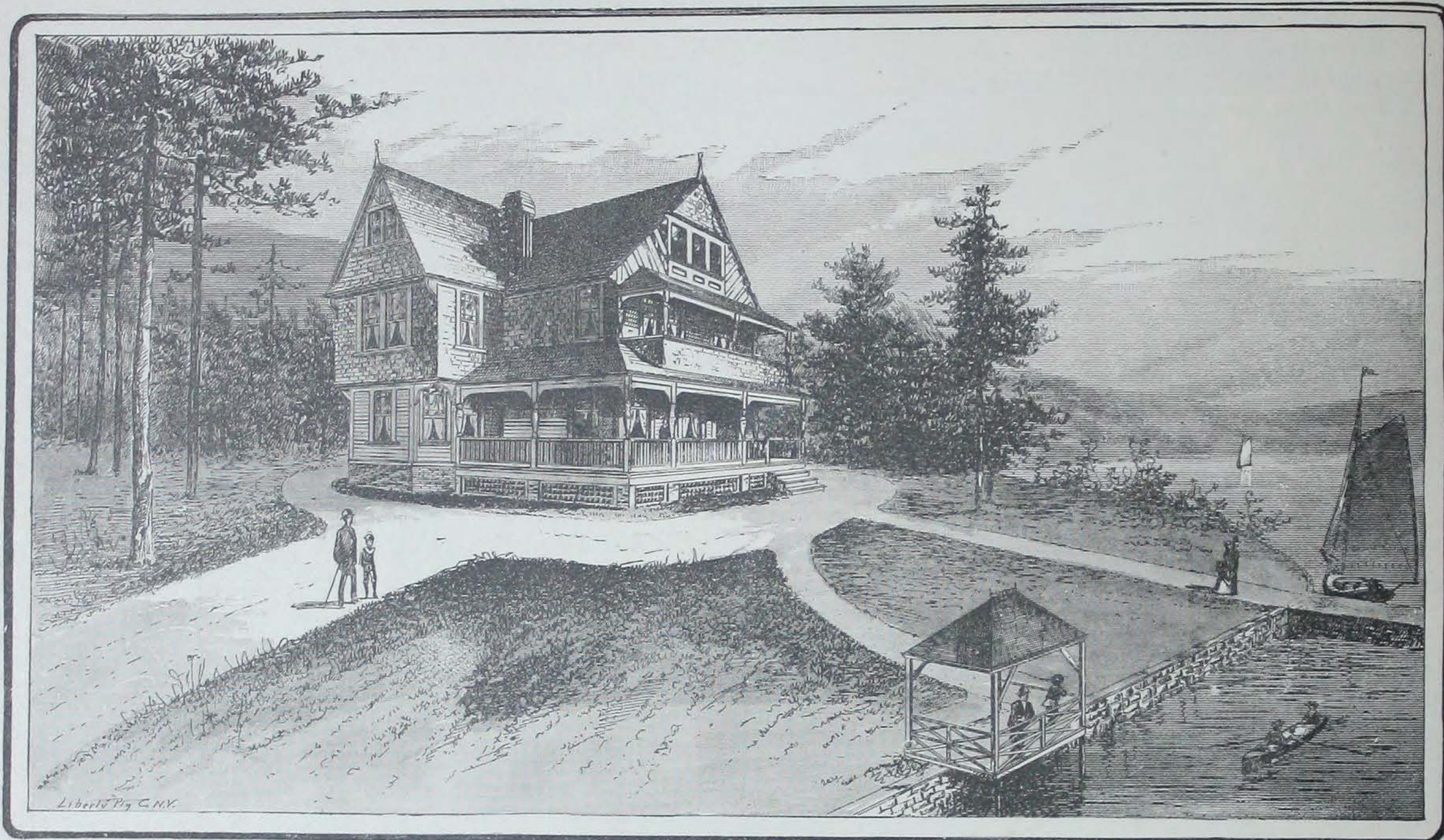
In this the staircase is put in the front or main entrance hall and is made an attractive feature.

Another bed-room is obtained in the second story, although the front bed-room is necessarily reduced in size.

This design also is appropriate for a side hill location.



SECOND FLOOR. NO. 341



DESIGN No. 342. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 342

SIZE OF STRUCTURE: Front, 28 ft.; extreme width, 37 ft. Side, 51 ft., including front veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft., 6 in.; Second Story, 9 ft.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Gables, shingles and panels; Roof, shingles.

COST: \$2,600, complete, except mantels and kitchen range.

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

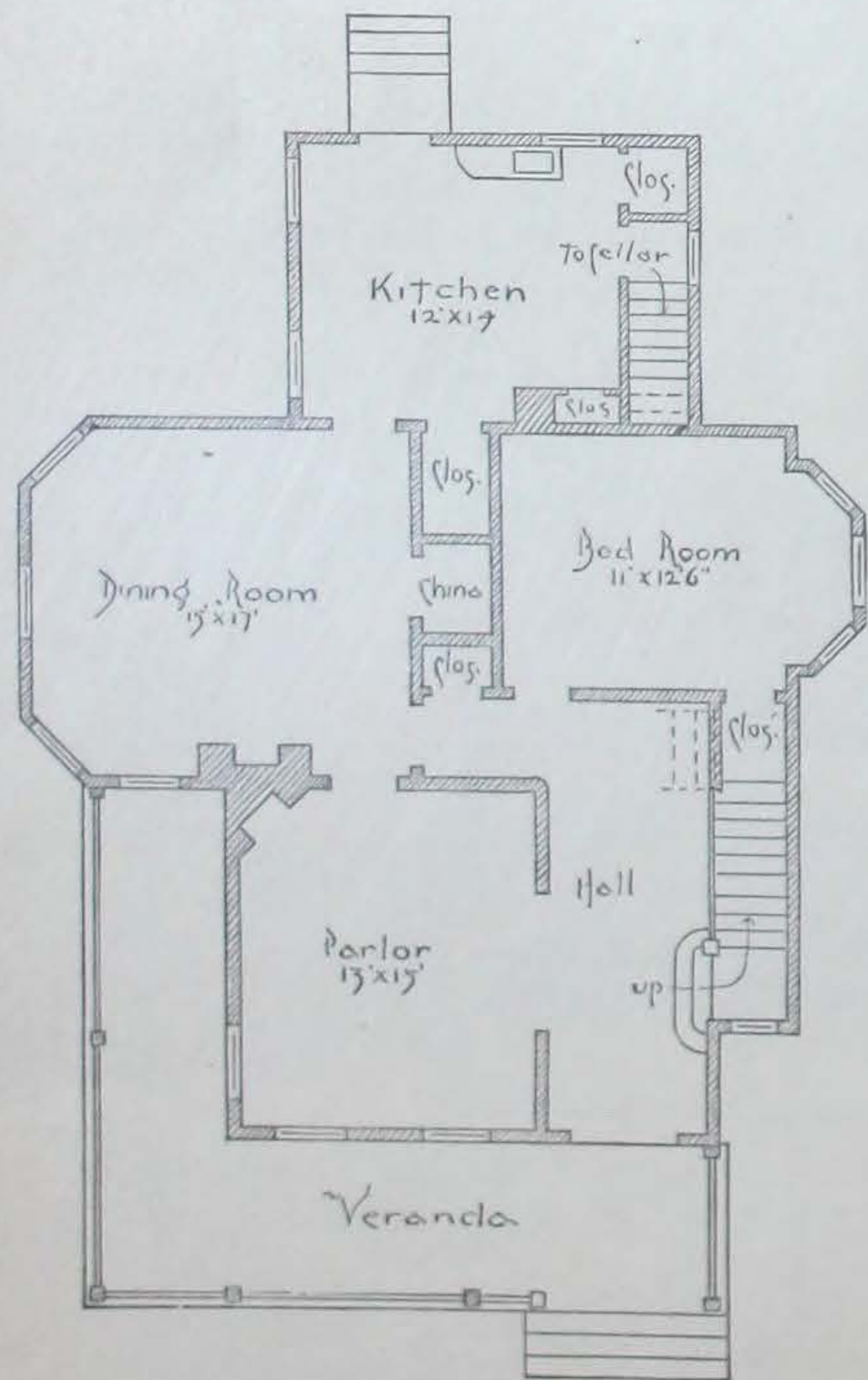
SPECIAL FEATURES.—Having an ample veranda and a large balcony, this is a suitable house for such a location as that shown in the view, or for any location where there is a fine outlook.

If preferred the bed-room on the first floor can be made a library or sitting-room, in which case it should be connected with the dining-room, by doing away with the closets between, or by making a passage of the china closet.

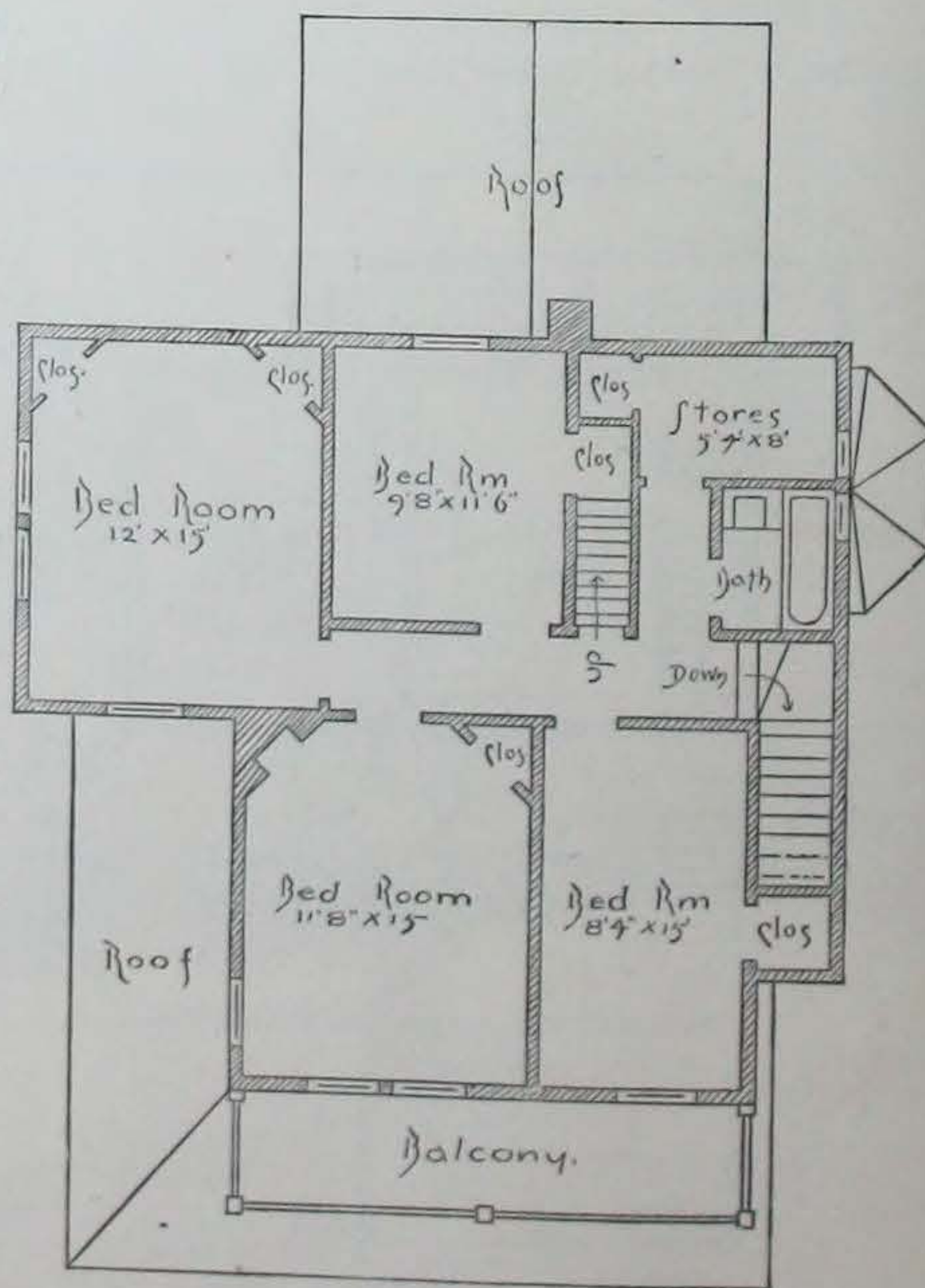
Two good bed-rooms can be finished in the attic if desired.

Cellar under the kitchen only.

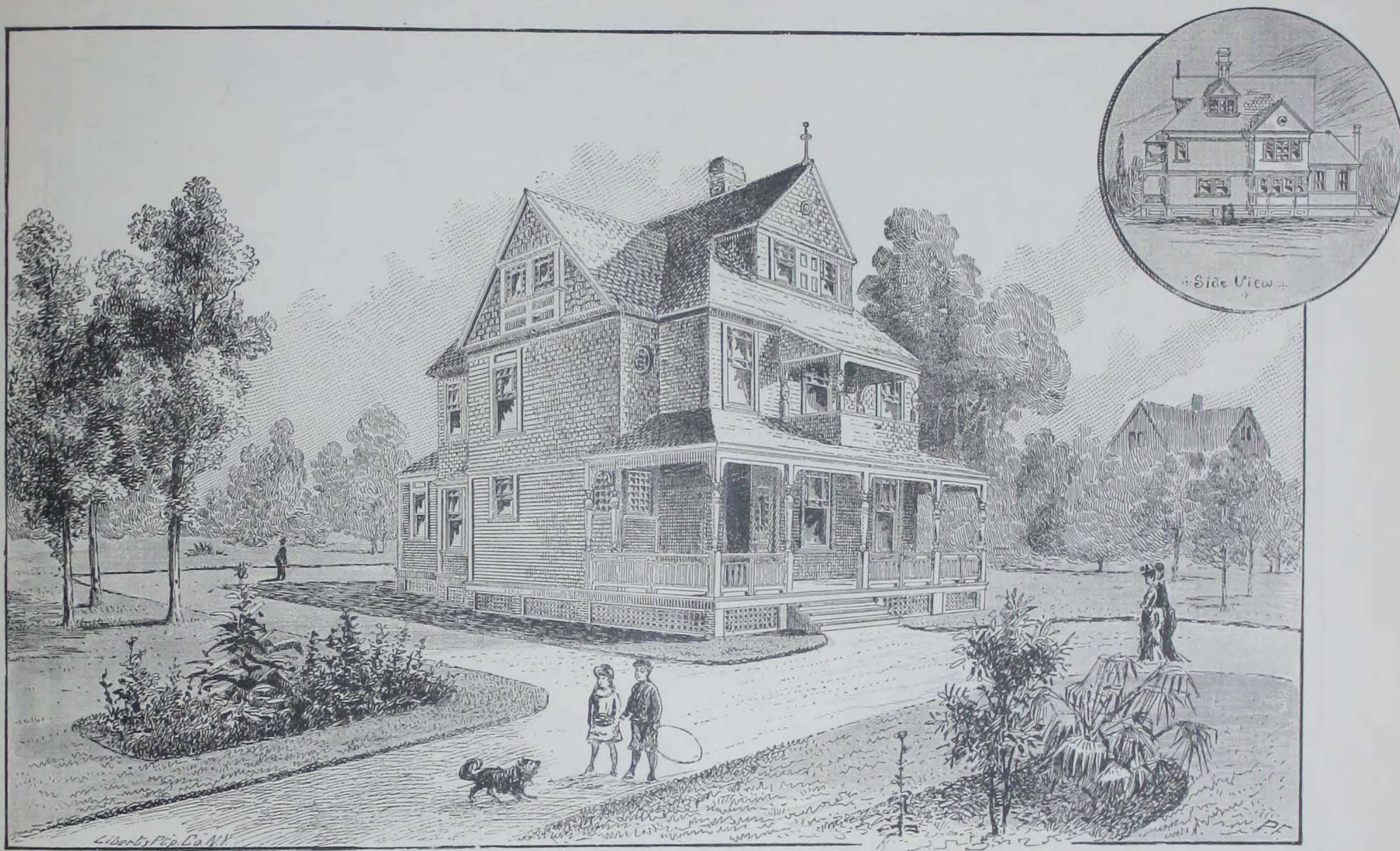
[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]



FIRST FLOOR, NO. 342



SECOND FLOOR, NO. 342



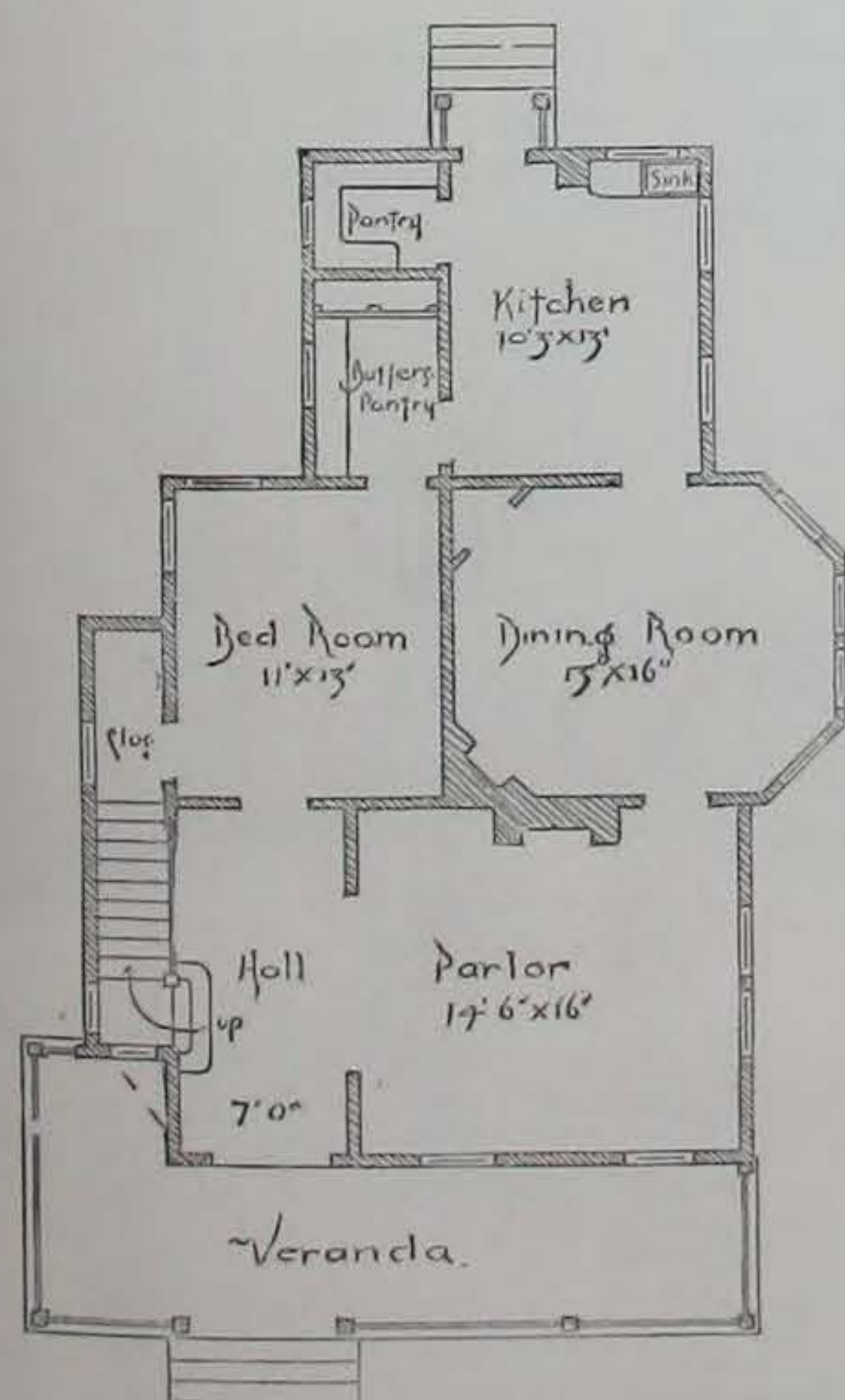
DESIGN No. 343. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 343

SIZE OF STRUCTURE: Front, 24 ft., 6 in.; extreme width, including staircase projection and dining-room bay, 32 ft. Side, 42 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 9 ft.; Second Story, 8 ft., 6 in.



FIRST FLOOR. NO. 343

MATERIALS: Foundation, brick piers; First Story, clapboards; Second Story, shingles; Roof, shingles.

COST: \$3,000, complete, except mantels.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and

distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

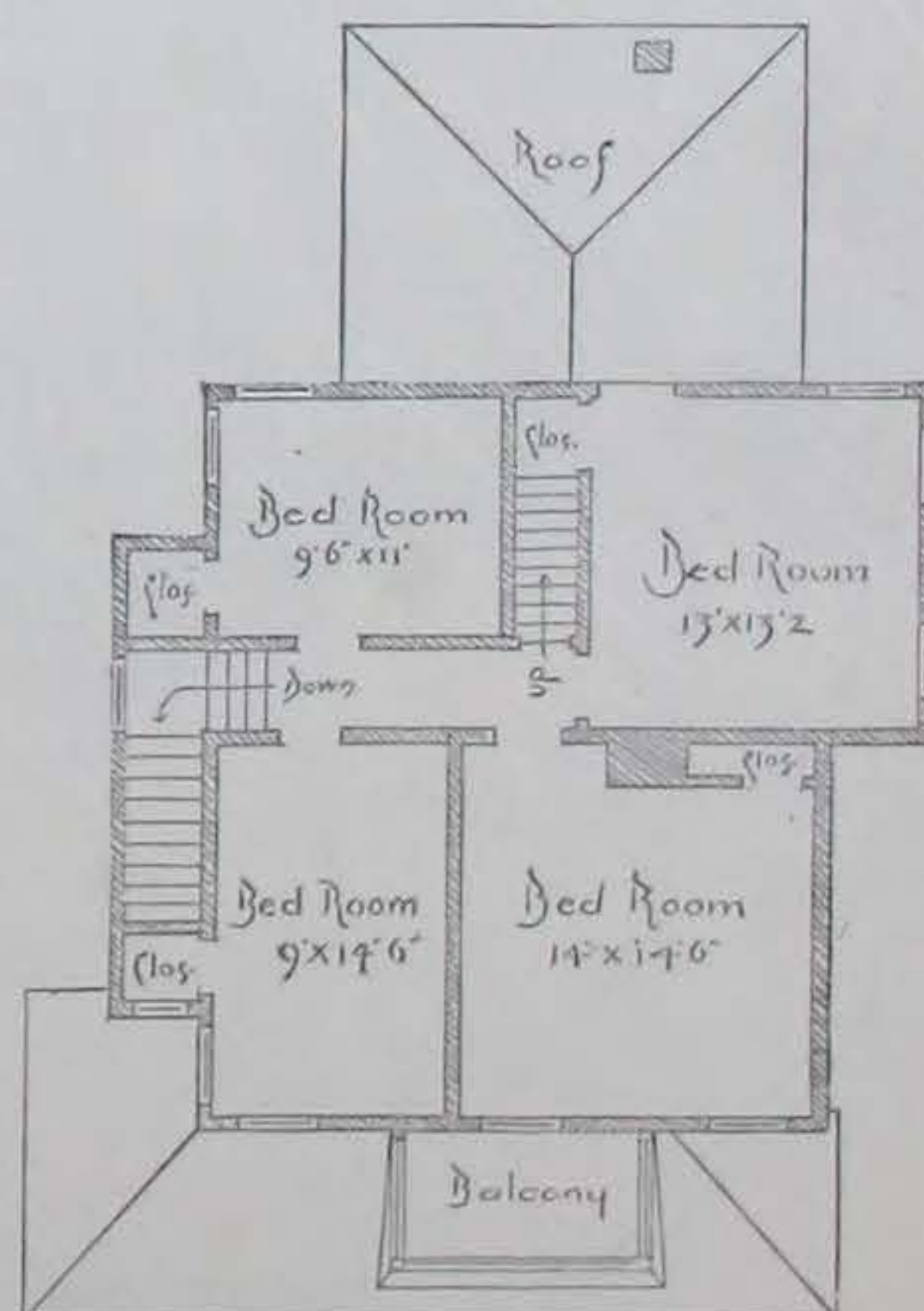
SPECIAL FEATURES.—Designed for erection in the South, this house has no cellar, but is built upon a foundation of brick piers. A cellar under the whole house, with stone and brick walls, would cost about \$200 additional.

The bed-room on first floor can be used as a library or sitting-room, and if so used it should be connected with the dining-room.

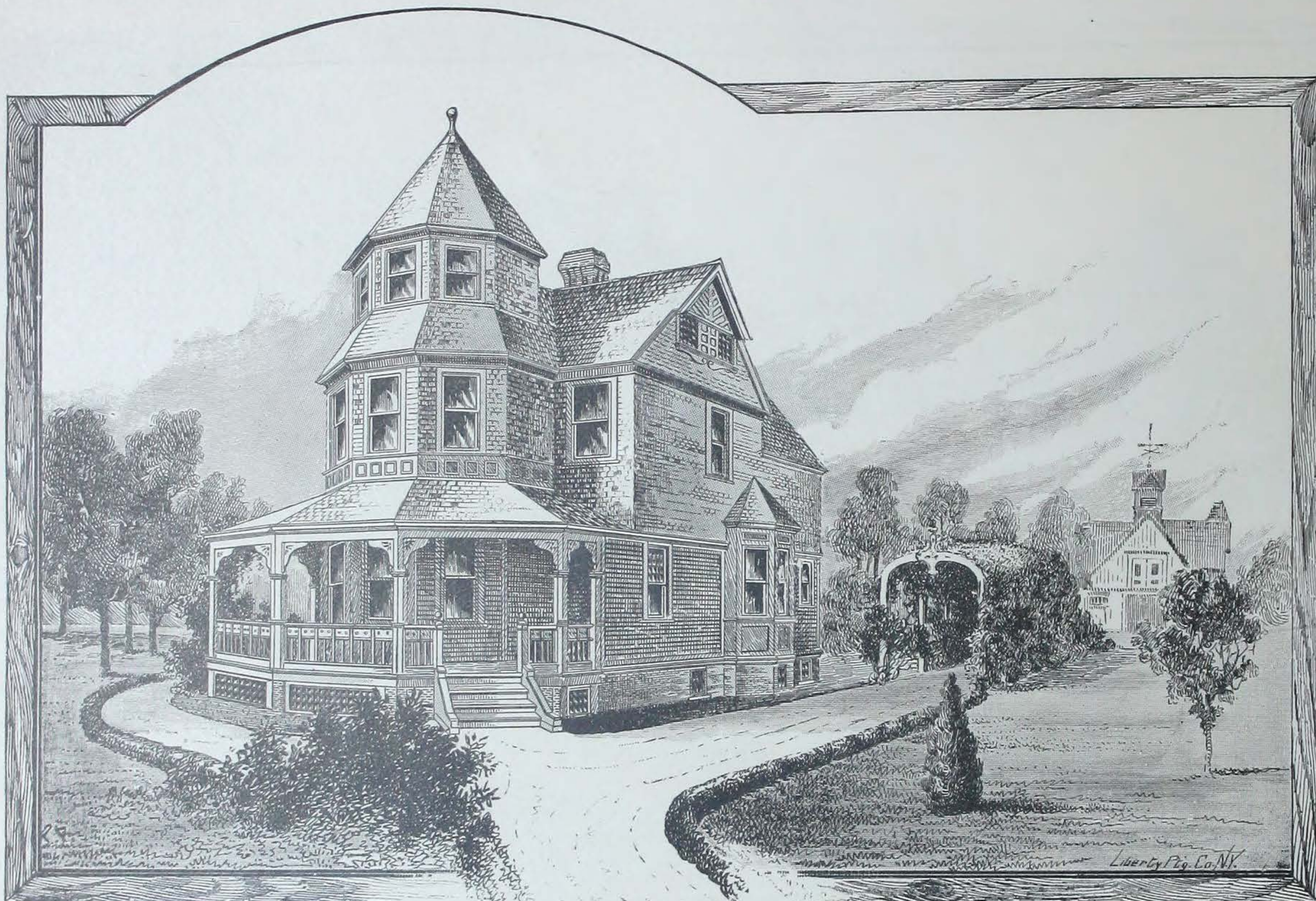
Open fire-places in the parlor and dining-room.

This would make a good seaside house; the ample veranda and the covered balcony are desirable features in a house intended as a summer residence.

It is unwise to dismiss the consideration of a plan because it was originally designed for a distant part of the country. One section can learn from another.



SECOND FLOOR. NO. 343

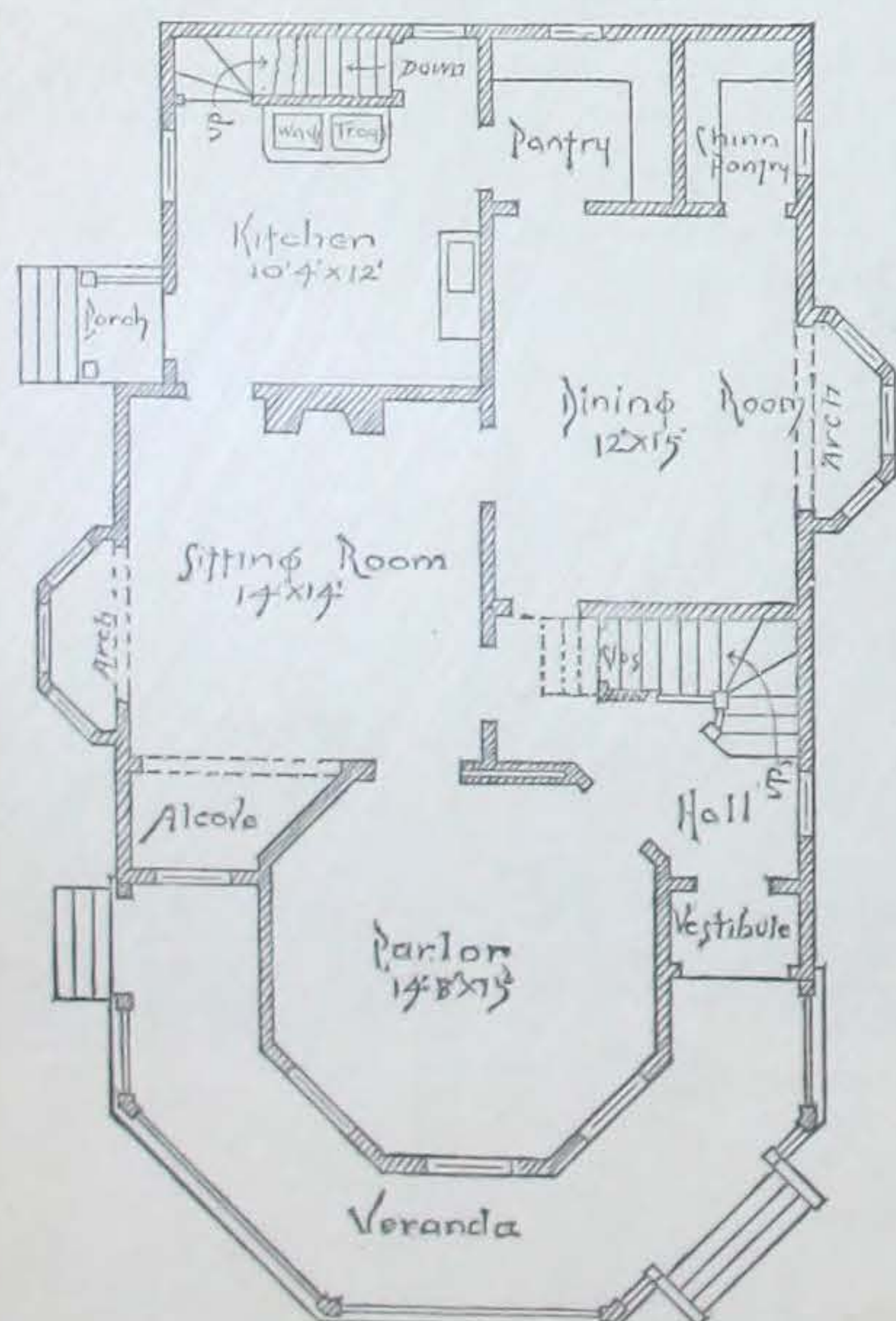


DESIGN No. 344. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 344

SIZE OF STRUCTURE: Front, 27 ft., 6 in. Side, 44 ft., 6 in.; depth over all, 50 ft., 6 in.

SIZE OF ROOMS: See floor plans.



FIRST FLOOR, NO. 344

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft., 3 in.; Second Story, 8 ft., 9 in.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles; Gables, shingles and panelling; Roof, shingles.

COST: \$3,000, complete, except mantels, heater and kitchen range.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified.

The publishers will be glad to acquaint the intending builder with this modified cost at any time.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—The front veranda is 6 ft. wide.

Parlor and sitting-room are connected by a sliding door.

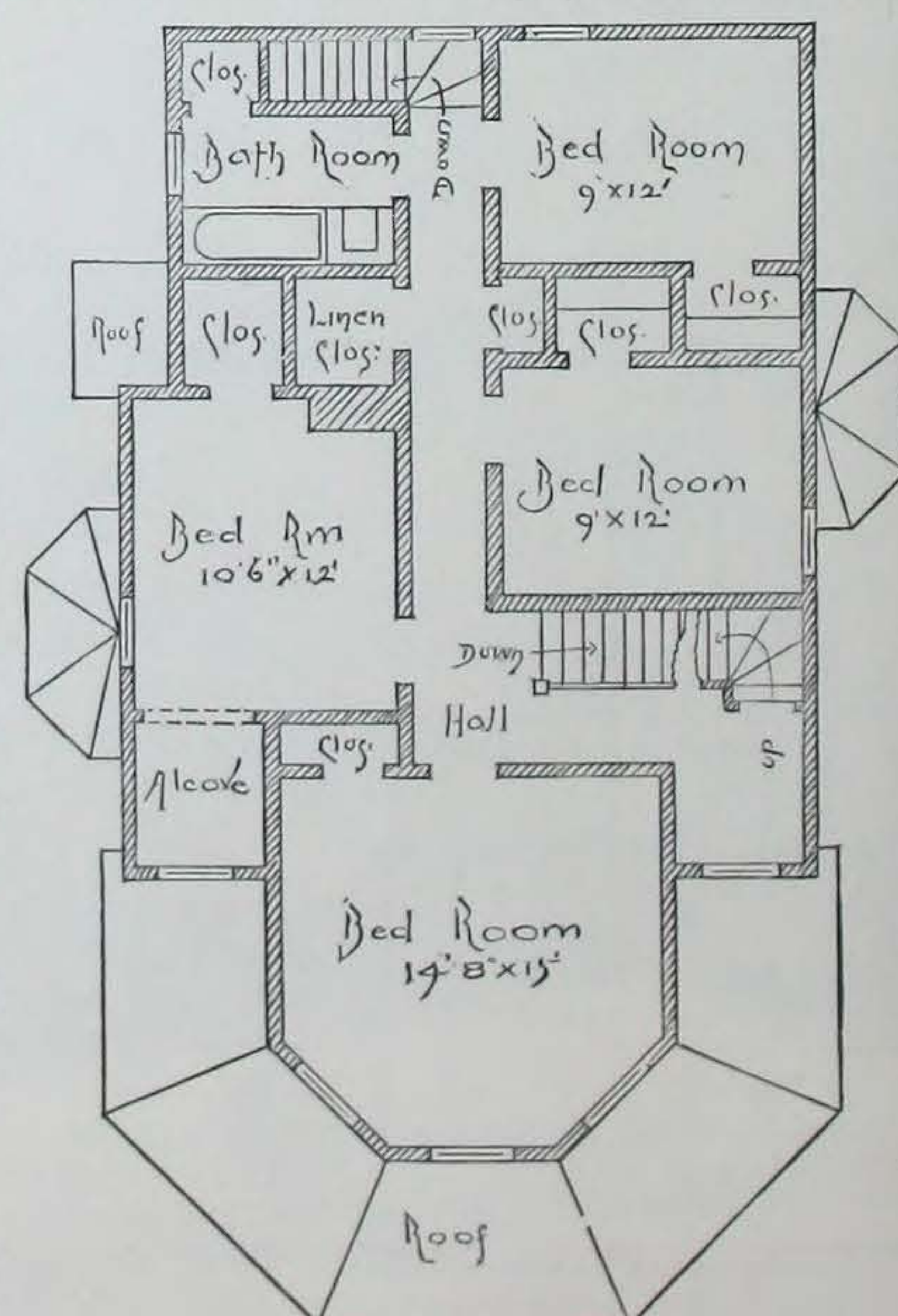
Very large pantry and china closet. Stationary wash-tubs in the kitchen.

Fire-place in the sitting-room. All other rooms heated by a furnace.

An abundance of large closets in the second story.

Two good rooms can be finished in the attic if desired, still leaving ample storage space.

Cellar extends under the whole house, with outside and inside entrance.



SECOND FLOOR, NO. 344



DESIGN No. 345. PERSPECTIVE VIEW
DESCRIPTION OF DESIGN NUMBER 345

SIZE OF STRUCTURE: Front 33 ft., 6 in. Side, 36 ft., including first veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft.

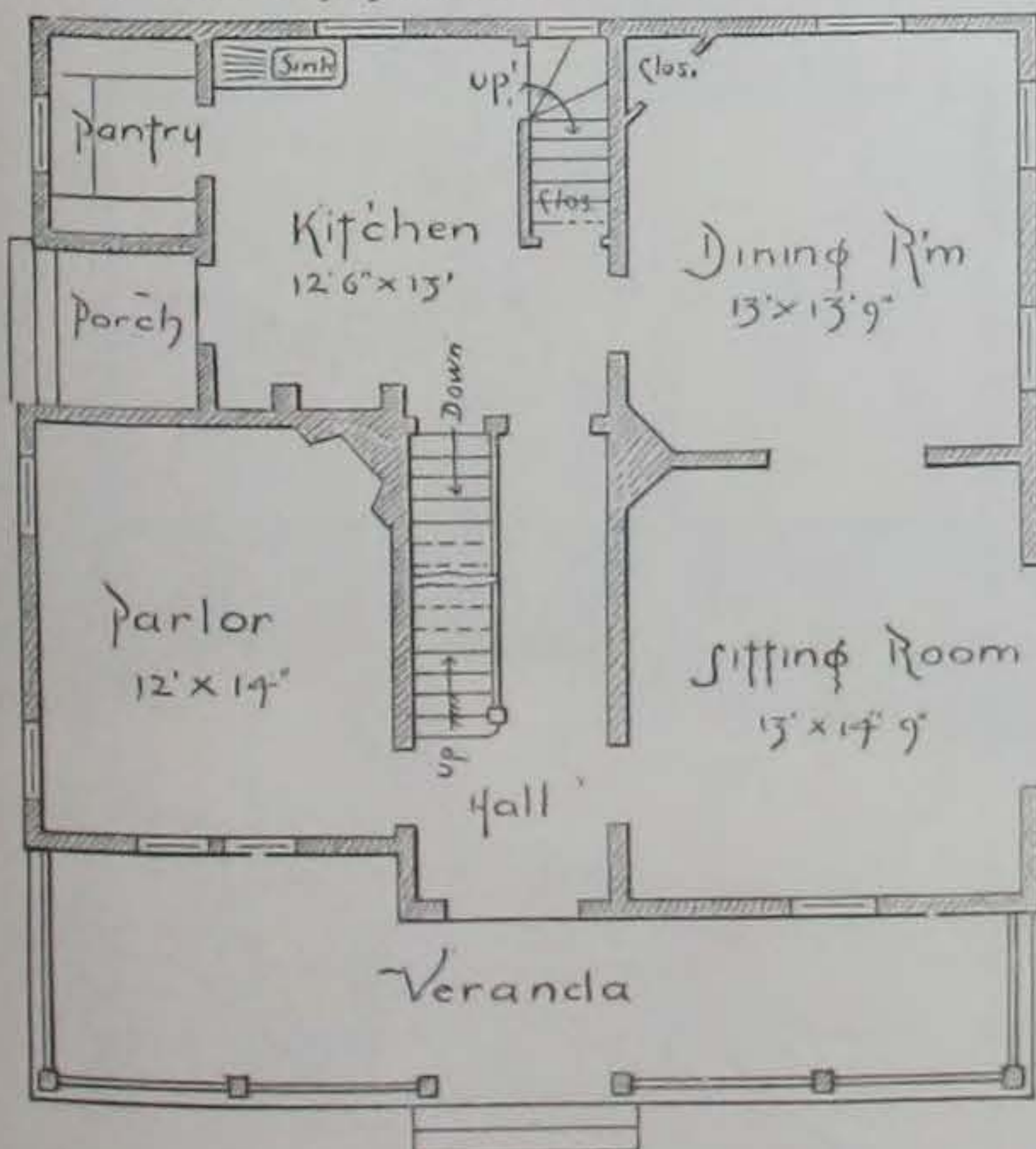
MATERIALS: Foundation, stone; First Story, clapboards; Second Story, clapboards; Roof, shingles.

COST: \$2,500, complete, except mantels and kitchen range.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.



FIRST FLOOR. NO. 345

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

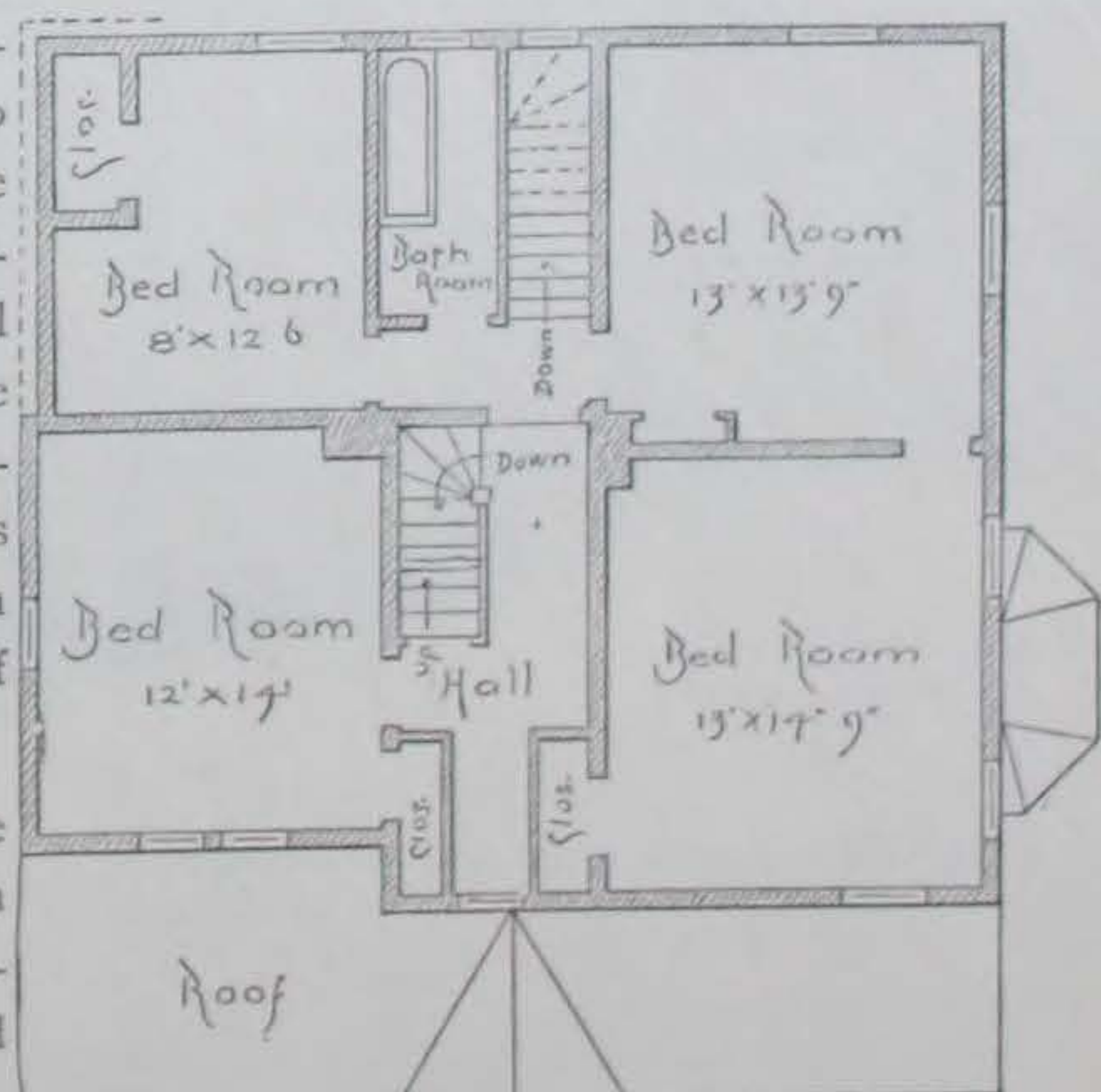
This design can be reversed, enlarged, reduced, or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—The central hall is 6 ft., 6 in. wide. There is a fire-place in the parlor. In the sitting-room and in the dining-room there are flues for stove connection, and small, neat hard-wood mantel shelves.

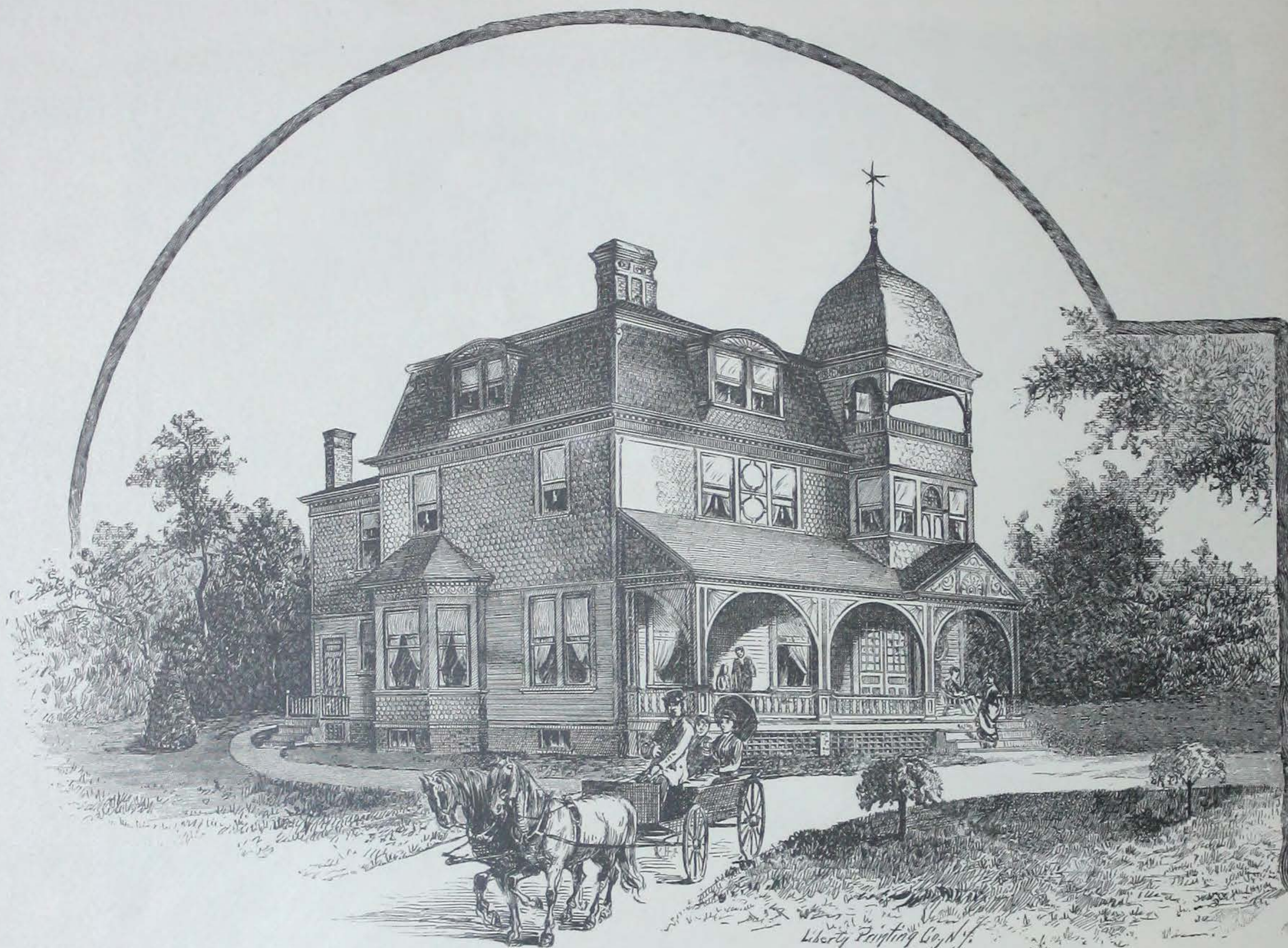
A bath-tub is provided in the second story, but no water-closet. Hot and cold water are carried to the tub and to the kitchen sink, a galvanized iron boiler furnishing the hot water.

Four very good bed-rooms in second story. Two good rooms can be finished in the attic if desired, still leaving storage room. The finishing of attic rooms is not included in our estimate of cost.

Cellar under the whole house, with walls laid in cement mortar, and cellar bottom concreted.



SECOND FLOOR. NO. 345



DESIGN No. 346. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 346

SIZE OF STRUCTURE: Front, 31 ft. Side, 46 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft.; Third Story, 8 ft.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Roof, slate.

COST: \$4,500, complete, except mantels, kitchen range and heater.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

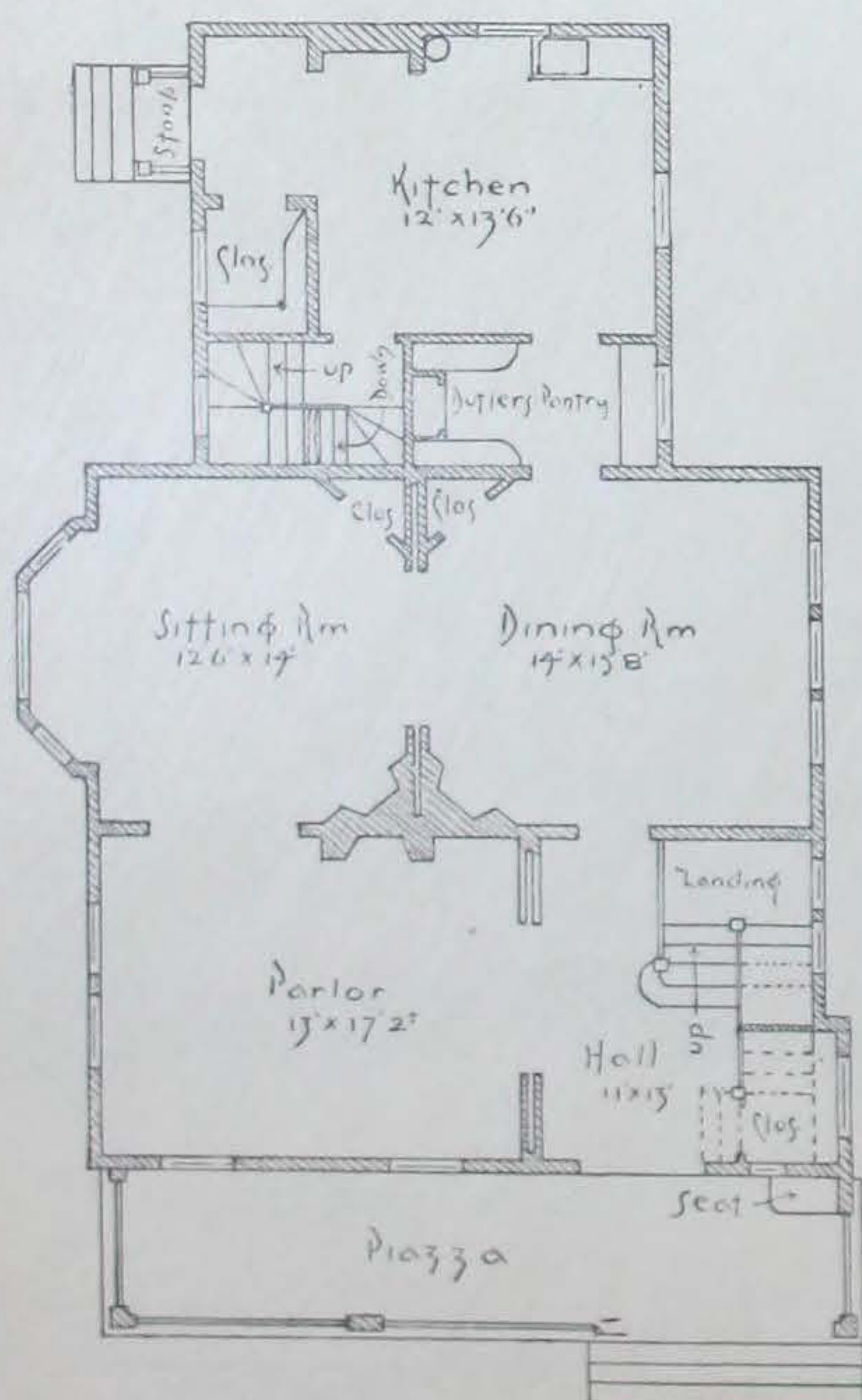
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Square hall, with platform staircase.

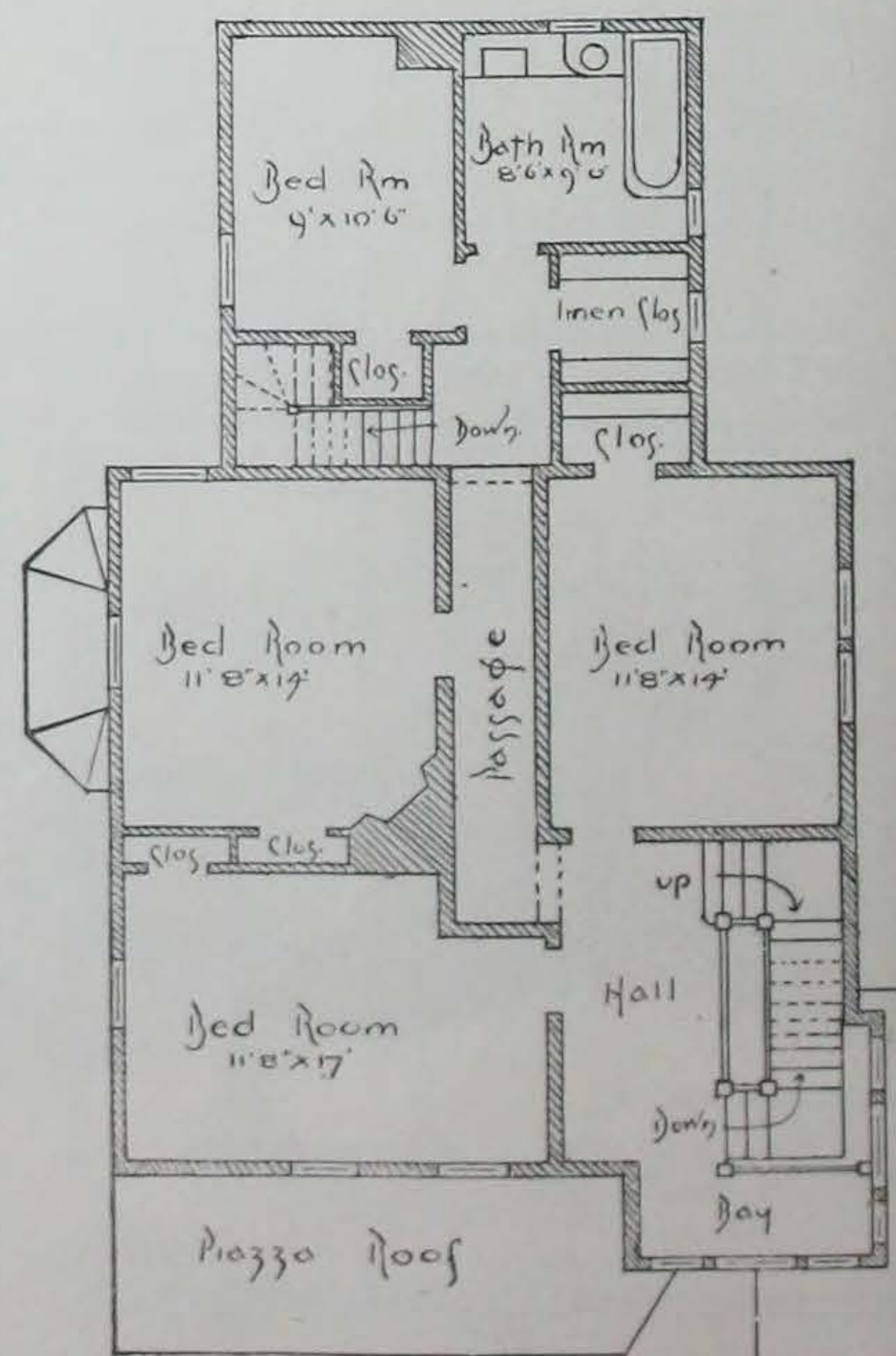
Sliding doors between hall and parlor and between sitting-room and dining-room.

Four bed-rooms, a bath-room, ample hall and large closets in the second story.

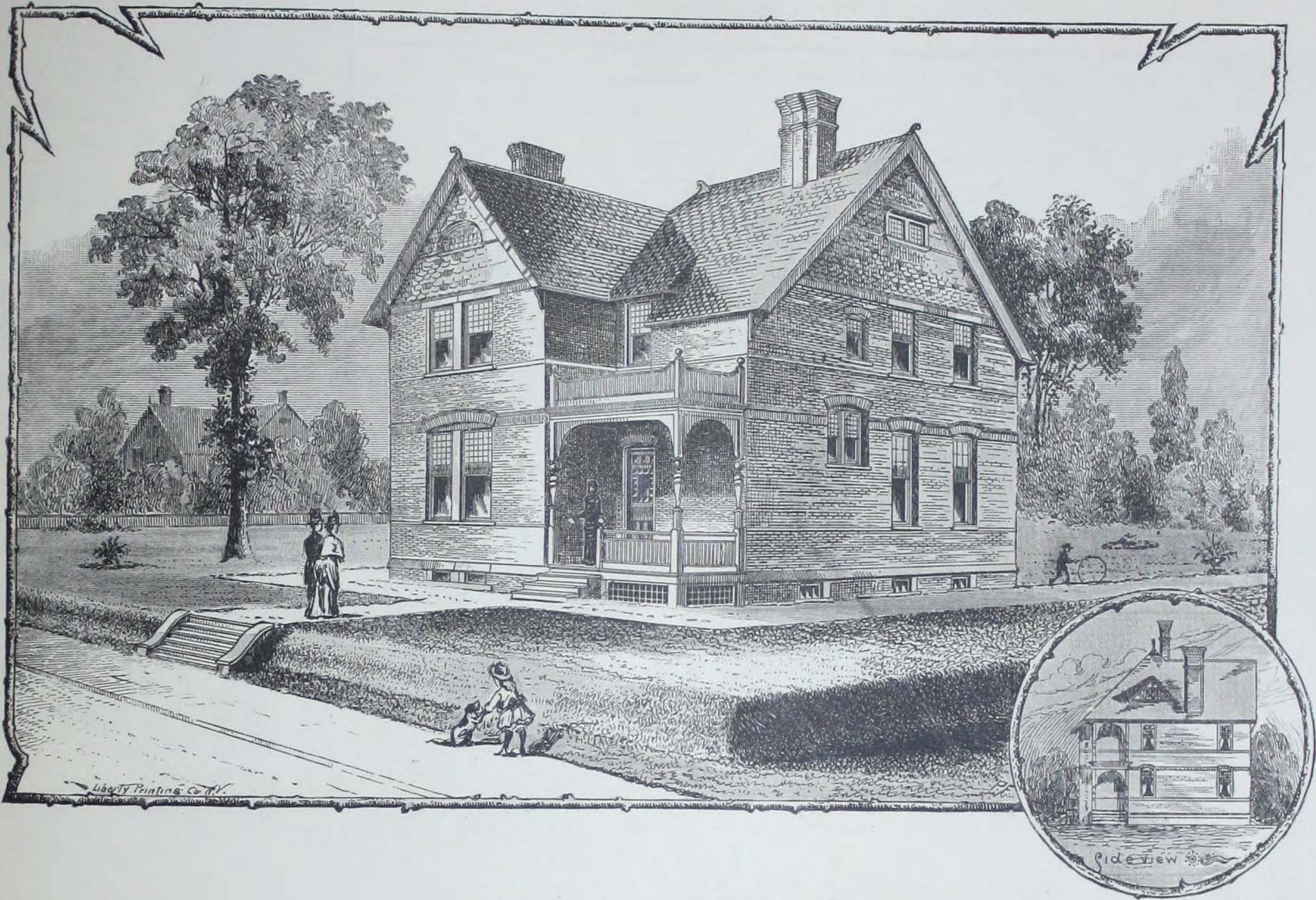
Three good bed-rooms in the third story. Cellar under the whole house.



FIRST FLOOR. NO. 346



SECOND FLOOR. NO. 346



DESIGN No. 347. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 347

SIZE OF STRUCTURE: Front, 33 ft. Side, 35 ft., 6 in.
SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft.

MATERIALS: Foundation, stone; First Story, brick; Second Story, brick; Gables, shingles; Roof, slate.

COST: \$4,000, complete, except mantels, furnace and kitchen range.

to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—A brick house, comfortable, but unpretentious. Good large rooms and a generous hall.

The staircase starts from the back end of the hall, and winds toward the front, having a square platform landing two-thirds of the way up. The newel, rail and balusters of the staircase are of hard wood.

The parlor and dining-room have open fire-places large enough to admit of log fires. These rooms are connected by double folding doors, but it would be better to hang a curtain and do away with the doors. The dining-room has a door opening to the rear porch.

The china-closet between the dining-room and kitchen has lockers for china and drawers for table linen.

Three large bed-rooms, a bath-room and large closets are obtained in the second story.

The attic is floored but not finished. Two rooms can be made there, if desired.

Cellar under the hall and kitchen. Stone walls under the whole house.

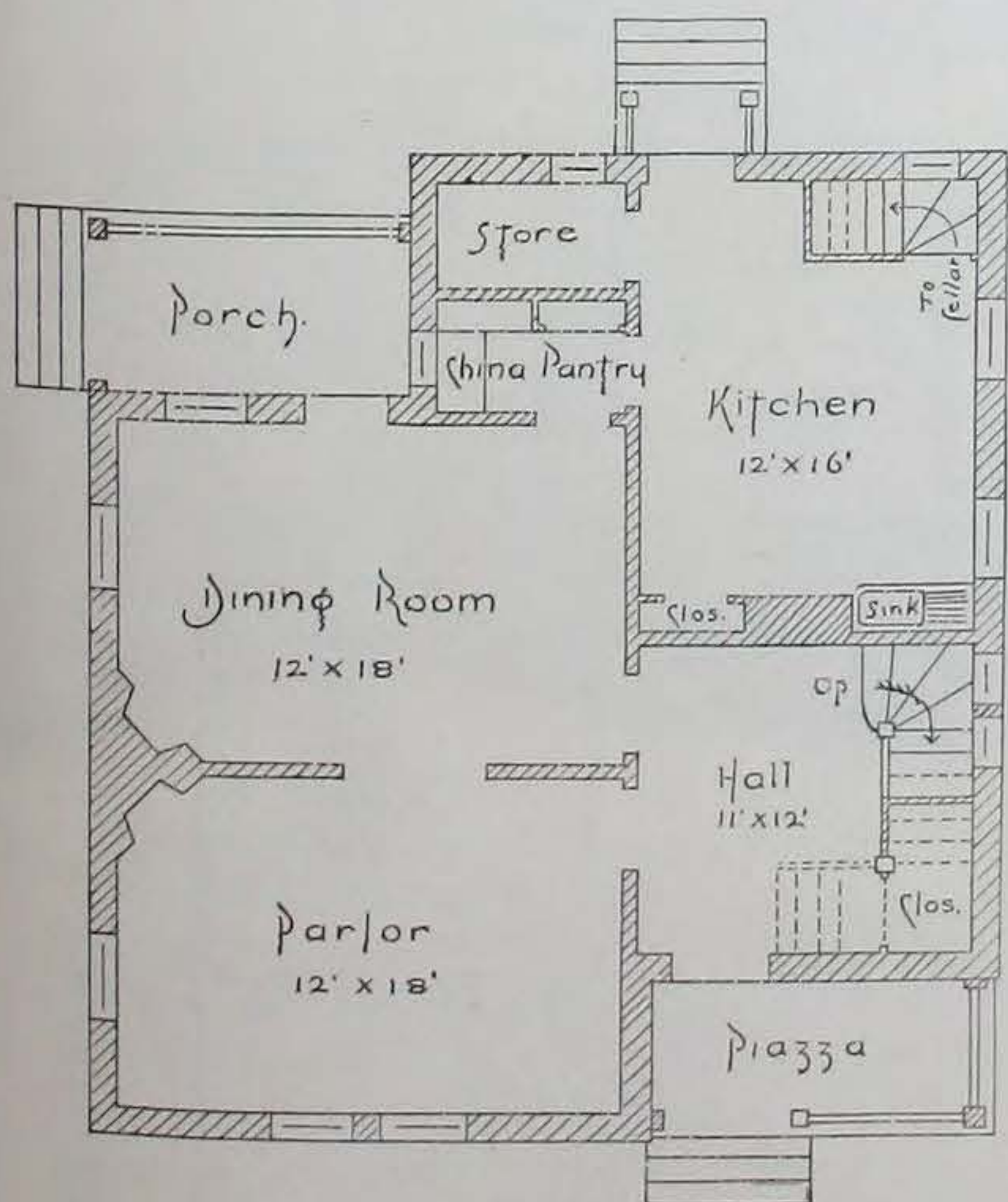
Selected stock brick are used for facing, and painted or oiled.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

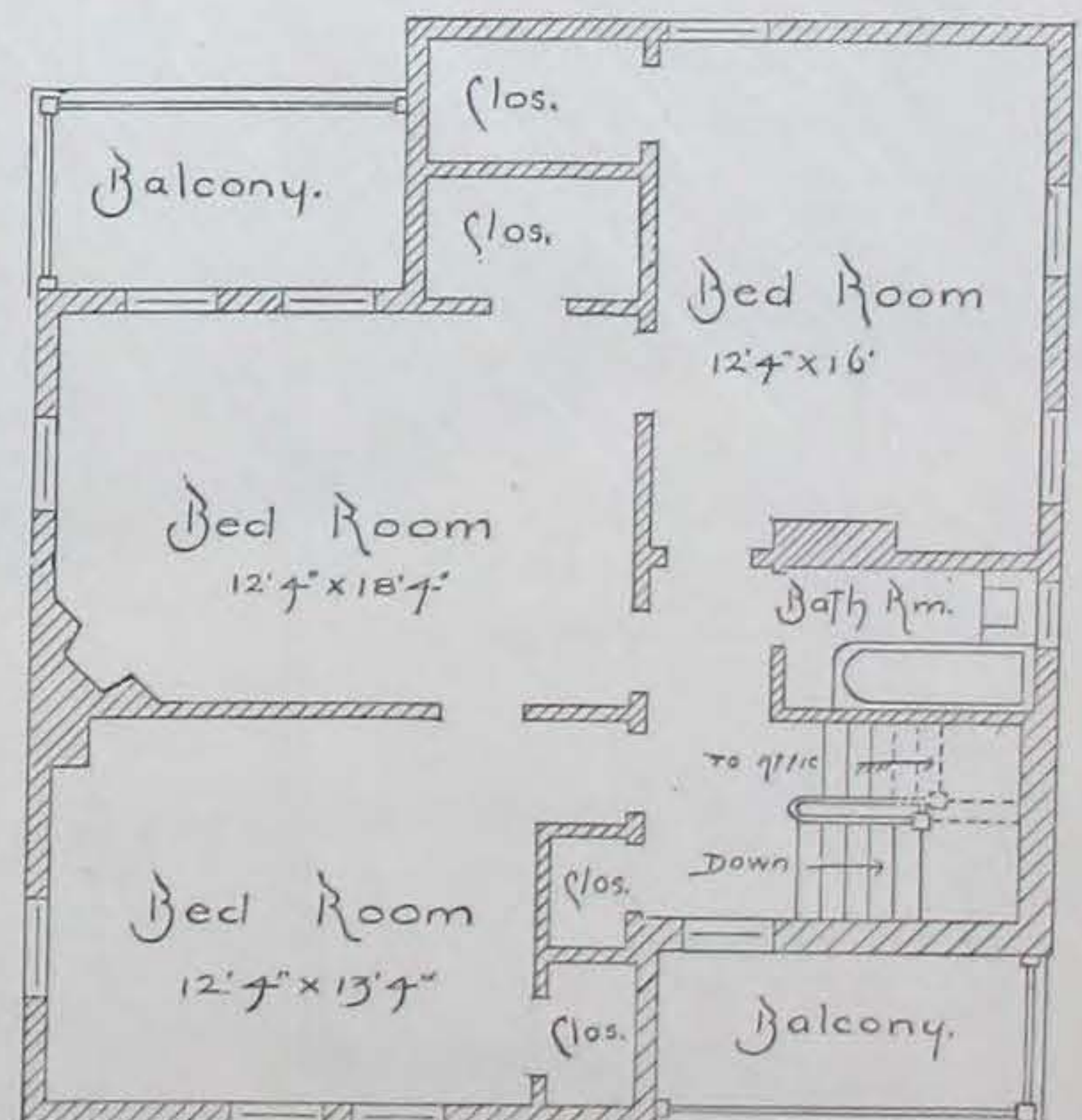
NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

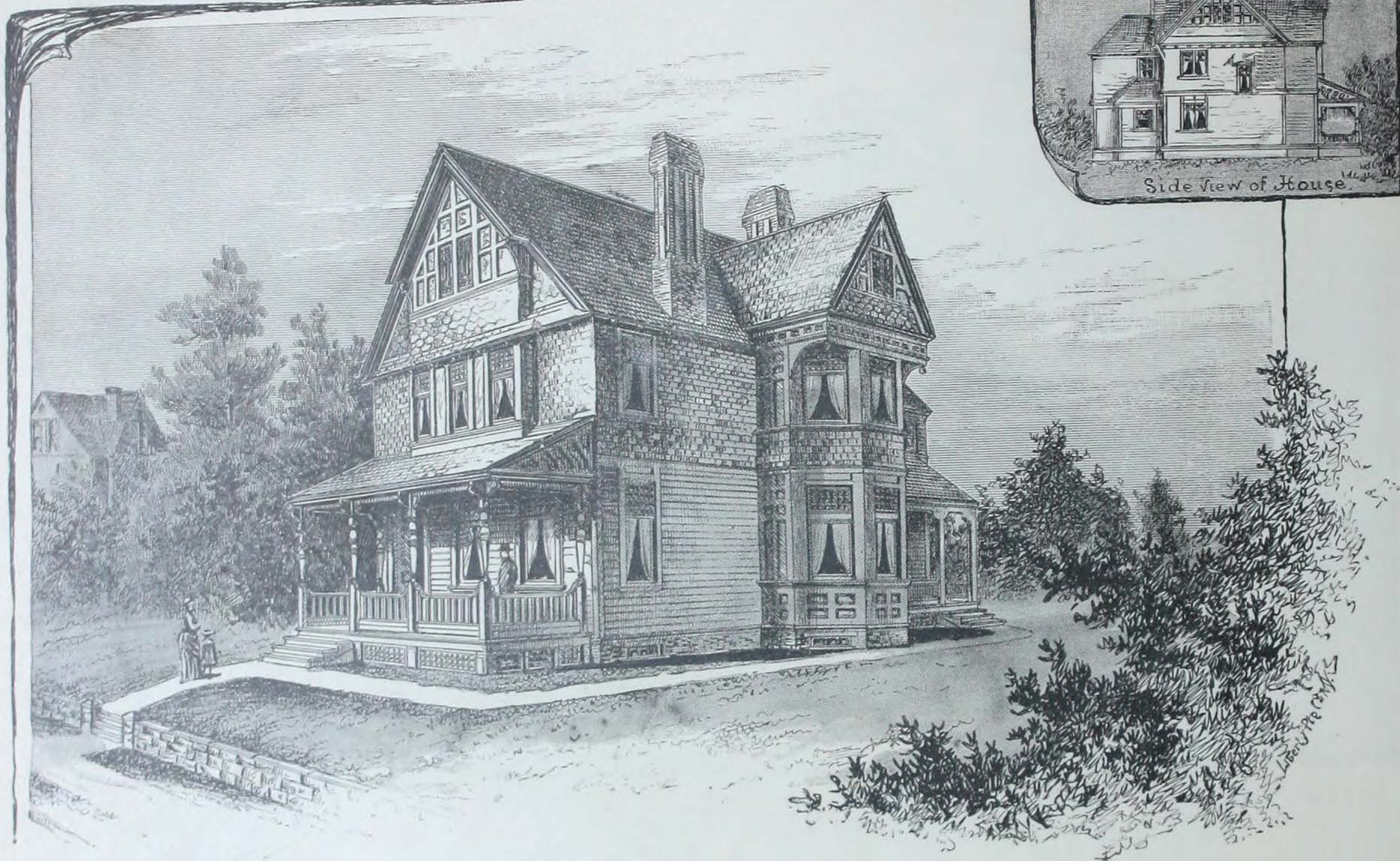
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also,



FIRST FLOOR. NO. 347



SECOND FLOOR. NO. 347



DESIGN No. 348. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 348

SIZE OF STRUCTURE: Front, 23 ft., 6 in.; width through dining-room and library, 32 ft. Side, 42 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft., 8 in.; Second Story, 8 ft., 10 in.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Gables, panelled and shingled; Roof, shingles.

COST: \$3,000, complete, except mantels, heater and kitchen range.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Sliding doors between parlor and library, and between library and dining-room. The opening between the hall and the parlor is intended for double folding doors or a portiere.

The front veranda is eight feet wide.

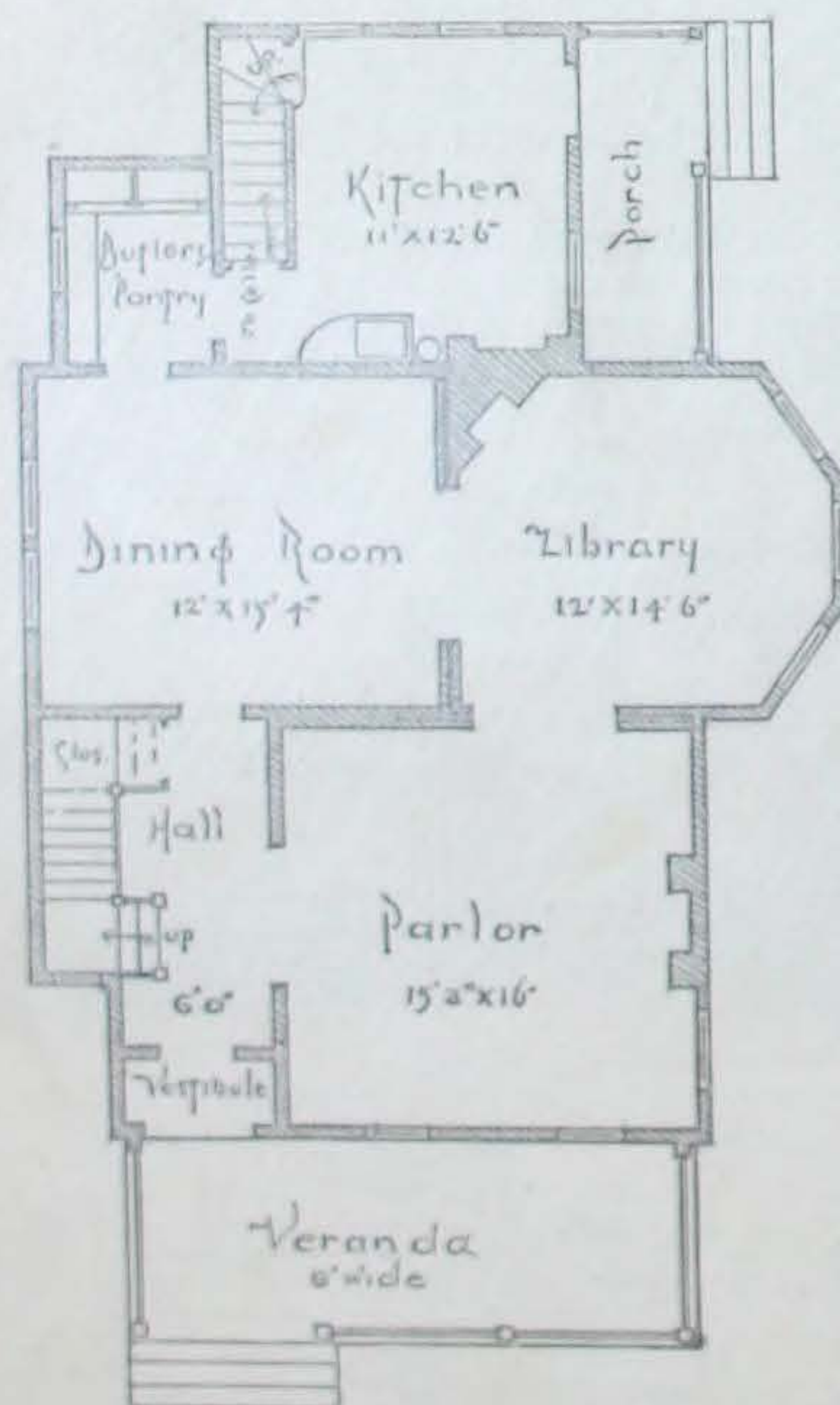
The smaller front bed-room can be made an alcove for the larger room if desired.

Our estimate does not include finishing the attic but two good rooms can be finished there if required and still leave plenty of space for storage purposes.

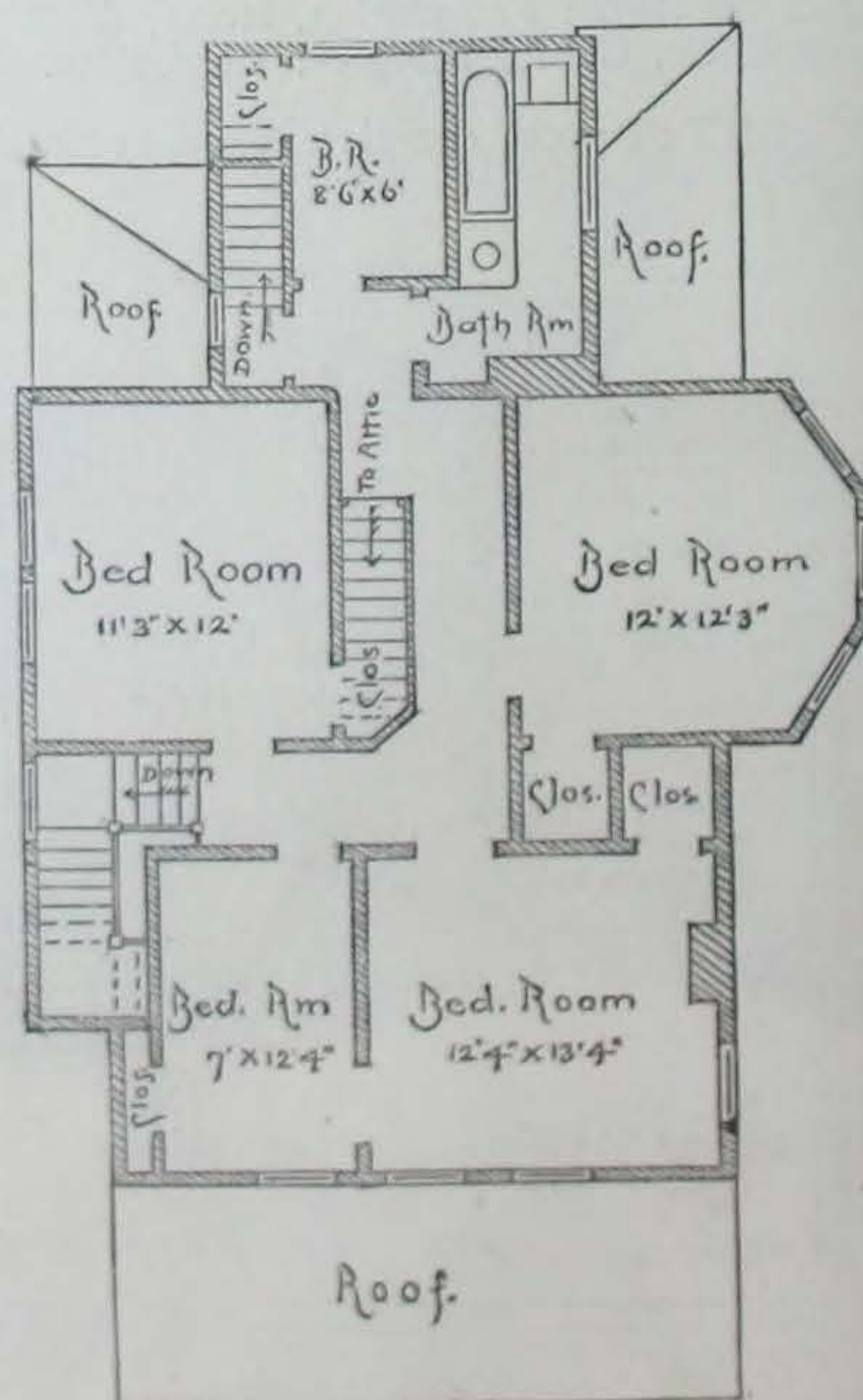
The house is trimmed in soft wood throughout, finished without paint.

Staircase is hard wood of unique design.

Cellar under kitchen, dining and sitting-rooms. Walls under the whole house.



FIRST FLOOR. NO. 348



SECOND FLOOR. NO. 348

THE CISTERN

The cistern should be located within easy reach of the laundry and kitchen and *outside* of the house. When located inside of the house it is difficult to ventilate it; if not well ventilated, and if not often and thoroughly cleaned, it is a positive source of danger to health.

A cistern built in a circular form (see Fig. 1), is the cheapest, as a much lighter wall will keep the earth from caving in, than would a wall built in any other form.

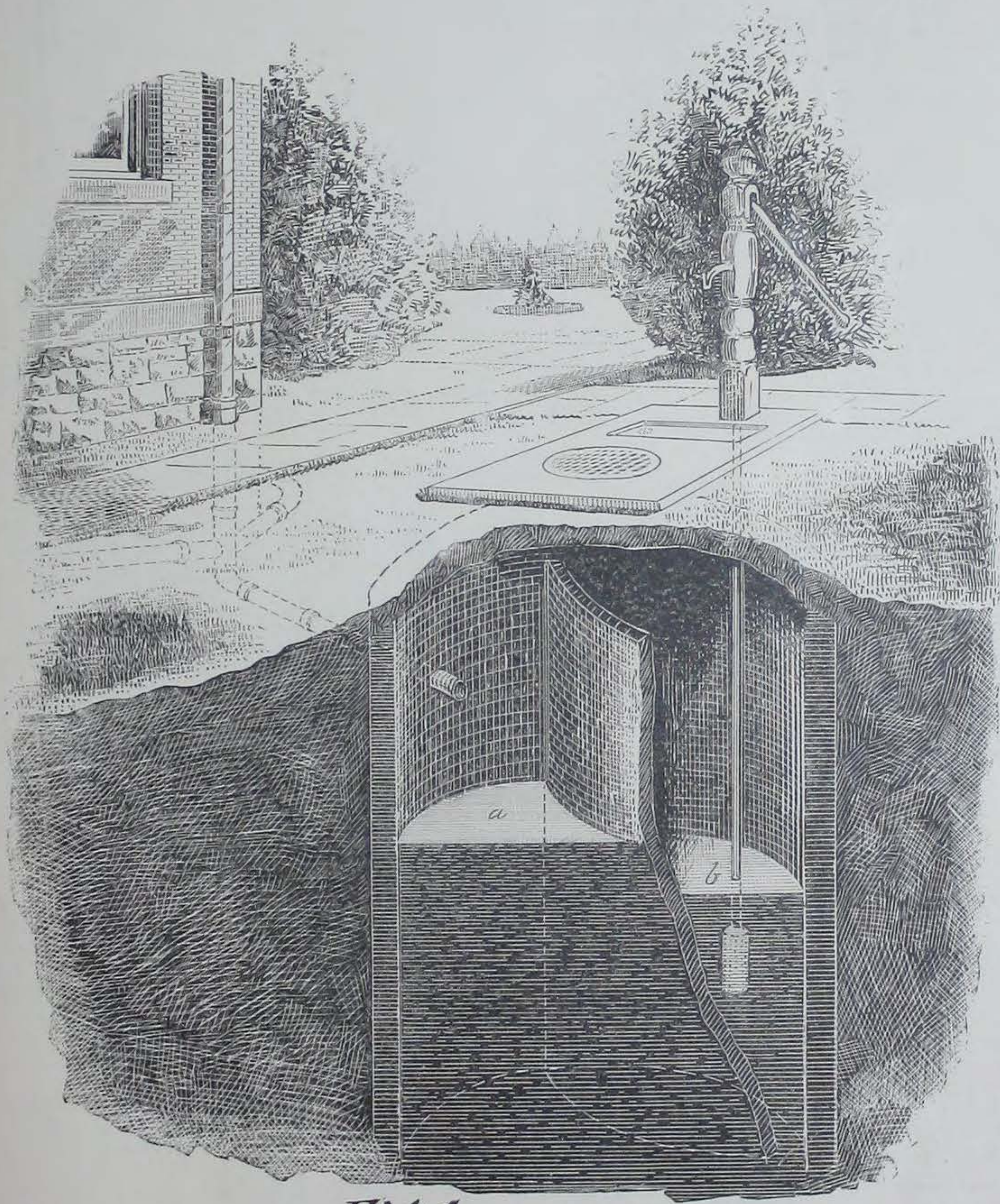


Fig 1.

The wall should be built of hard brick, laid in cement mortar, and thoroughly coated on the inside with Portland cement. This coating should be run to a smooth surface, in order that it may be easily cleaned.

The next step is to build a curved wall of porous brick across the cistern, dividing the cistern vertically into two compartments.

A curved wall should be built to insure strength.

Turning the water into the larger chamber (*a* Fig. 1), it presses against the curved wall, and percolates through to the smaller chamber (*b* Fig. 1), leaving the greater part of its impurities in the larger chamber and in the wall.

Other impurities (if there be any) should be retained by means of a charcoal filter attached to the pump supply pipe, so that when the water comes to the surface it should be pure.

A dome shaped cover and man hole should be provided so that both chambers can be easily reached and often cleaned. The man hole cover should be perforated to secure ventilation. A fine wire screen secured to the under side of the man hole cover will prevent bugs, dirt, etc., from falling in.

The objection to this plan is that, in time, the porous partition wall may become fouled, requiring its removal and rebuilding with new brick.

Another good plan is to build the cistern in a circular and dome covered form, as described above, and at one side build a separate filtering receiver as shown in Fig. 2.

The water is received in the reservoir *a*, and is relieved of its impurities by passing underneath a dividing partition and through layers of gravel and charcoal, rising in the compartment *b* to the level of the outlet leading directly to the cistern proper (*c*).

The objection to this plan is that a heavy and rapid rain fall is apt to force the water so rapidly through the filtering layers that impurities may be carried into the cistern.

By combining the best features of the two plans described above the best cistern is secured, in our opinion. To do this make the partition in Fig. 1 of hard burned brick; lay the same in Portland cement, and coat each side of the partition with cement the same as walls, so that water can not percolate through the bricks from "*a*" to "*b*." At the floor of the cistern a row of holes about 4 inches square and 16 inches apart, should be left to allow the water to pass through. In the bottom of each chamber place a layer of gravel about 12 inches deep, on this a layer of charcoal 6 inches deep, and on this again a layer of sand about 6 inches deep. This gives the water a double filtration before it reaches the pump, which should have a charcoal filter attached to the base of the supply pipe.

This arrangement of the layers makes it an easy task to clean the cistern; by removing the layer of the sand in the chamber "*a*," the matter most likely to decompose and breed disease, can be taken up with the sand, and a fresh layer put in. When the charcoal and gravel become foul, they may be easily replaced in a like manner. The one man hole as shown in Fig. 1 answers for the two chambers.

At the bottom of the leader from the roof there should be two pipes, one leading to the cistern and the other to the sewer or the ground. A damper arrangement is placed at the junction of these pipes for the purpose of turning the first part of a rainfall and with it all the dust, leaves, bird excrement, etc., into the sewer or on to the ground. This attachment can be procured, ready made, and is supplied by roofers.

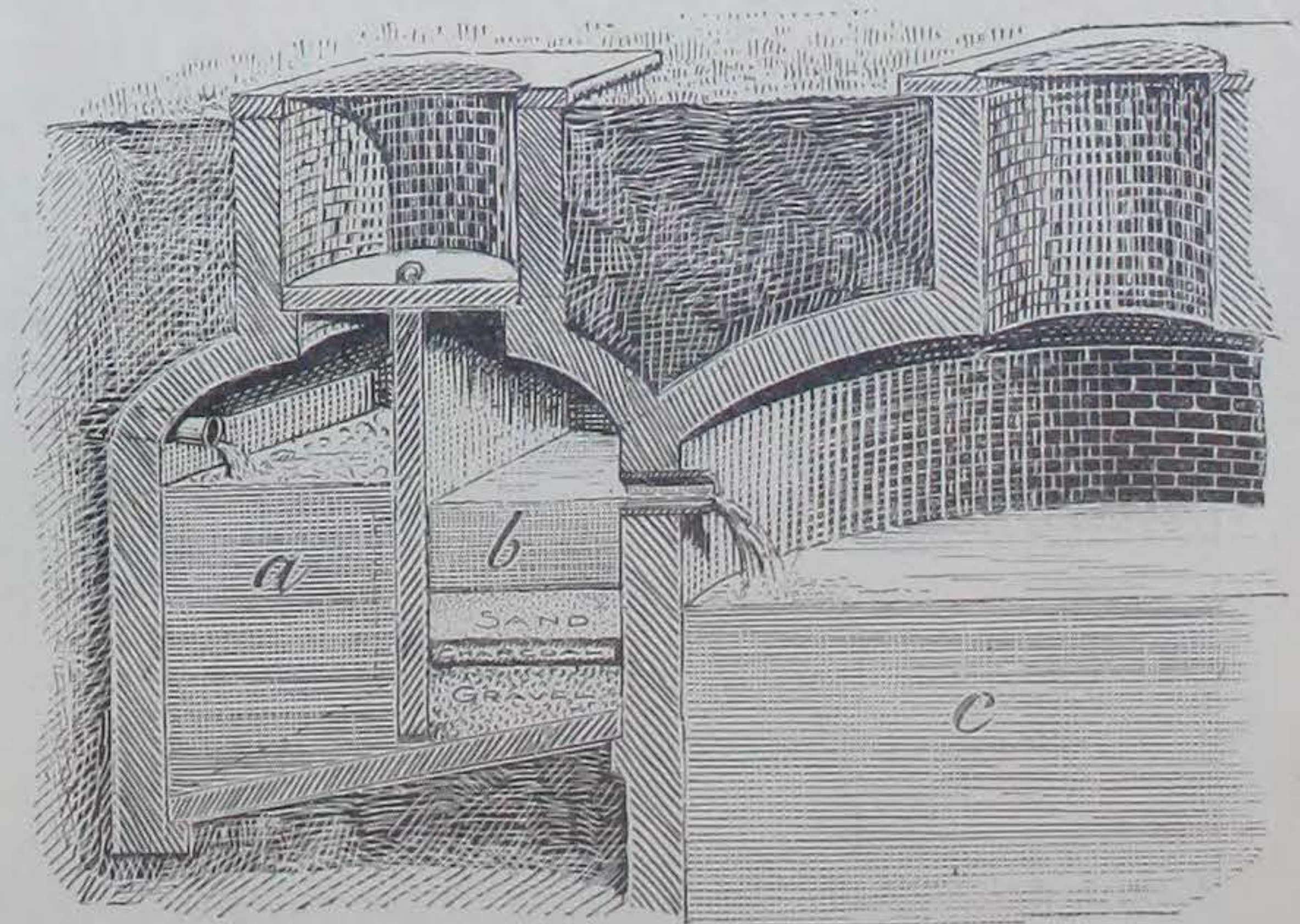


Fig 2.



DESIGN No. 349. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 349

SIZE OF STRUCTURE: Front, 33 ft., including veranda. Side, 46 ft.
 SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft., 6 in.; Second Story, 9 ft.; Attic Story, 8 ft., 6 in.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles; Roof, shingles.

COST: \$3,500, complete, except mantels and kitchen range.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTE

The cost is figured from prices of material and labor in the neighborhood of

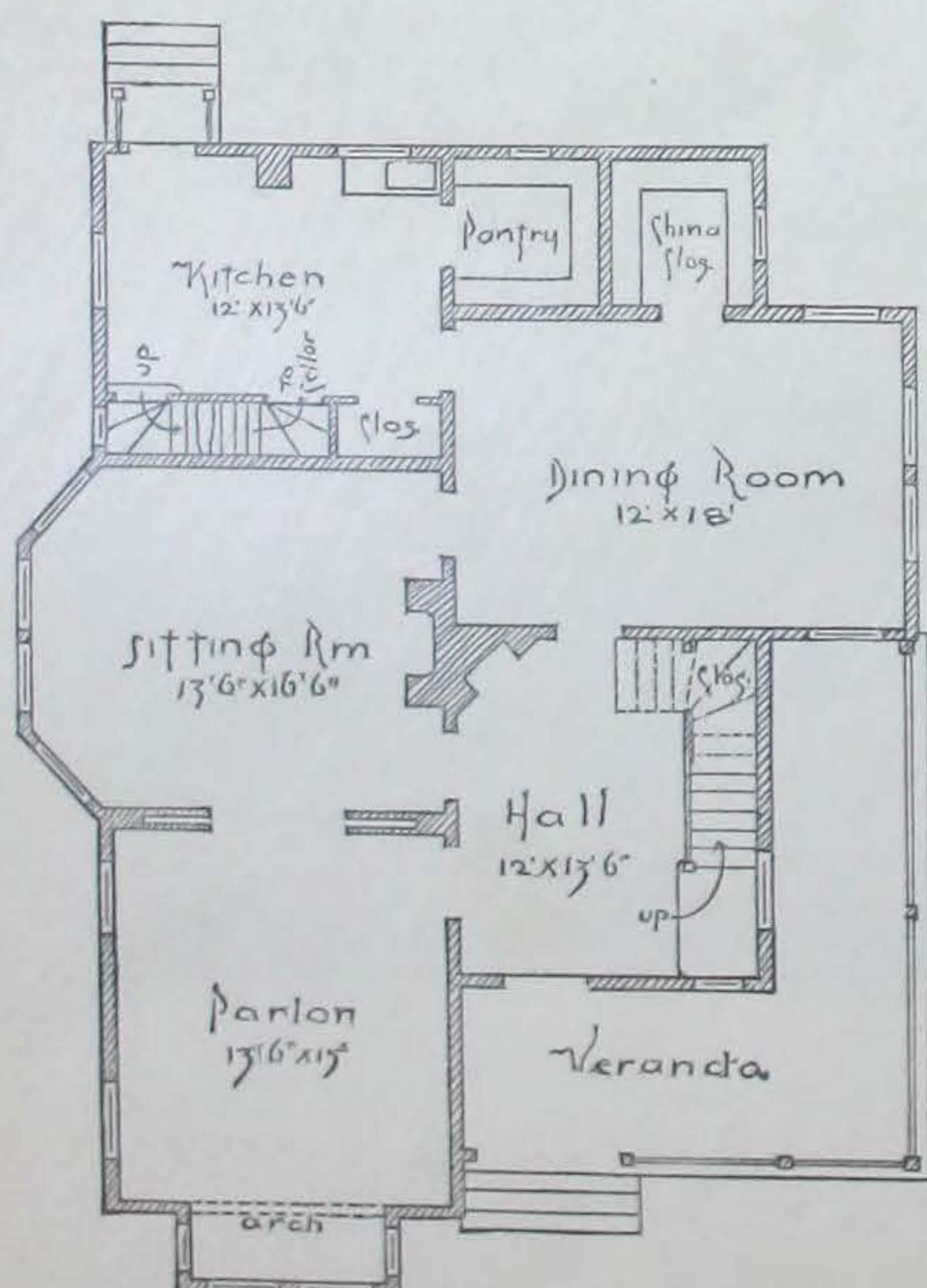
New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

SPECIAL FEATURES.—Cellar under kitchen, sitting-room and parlor, with brick walls under the whole house.

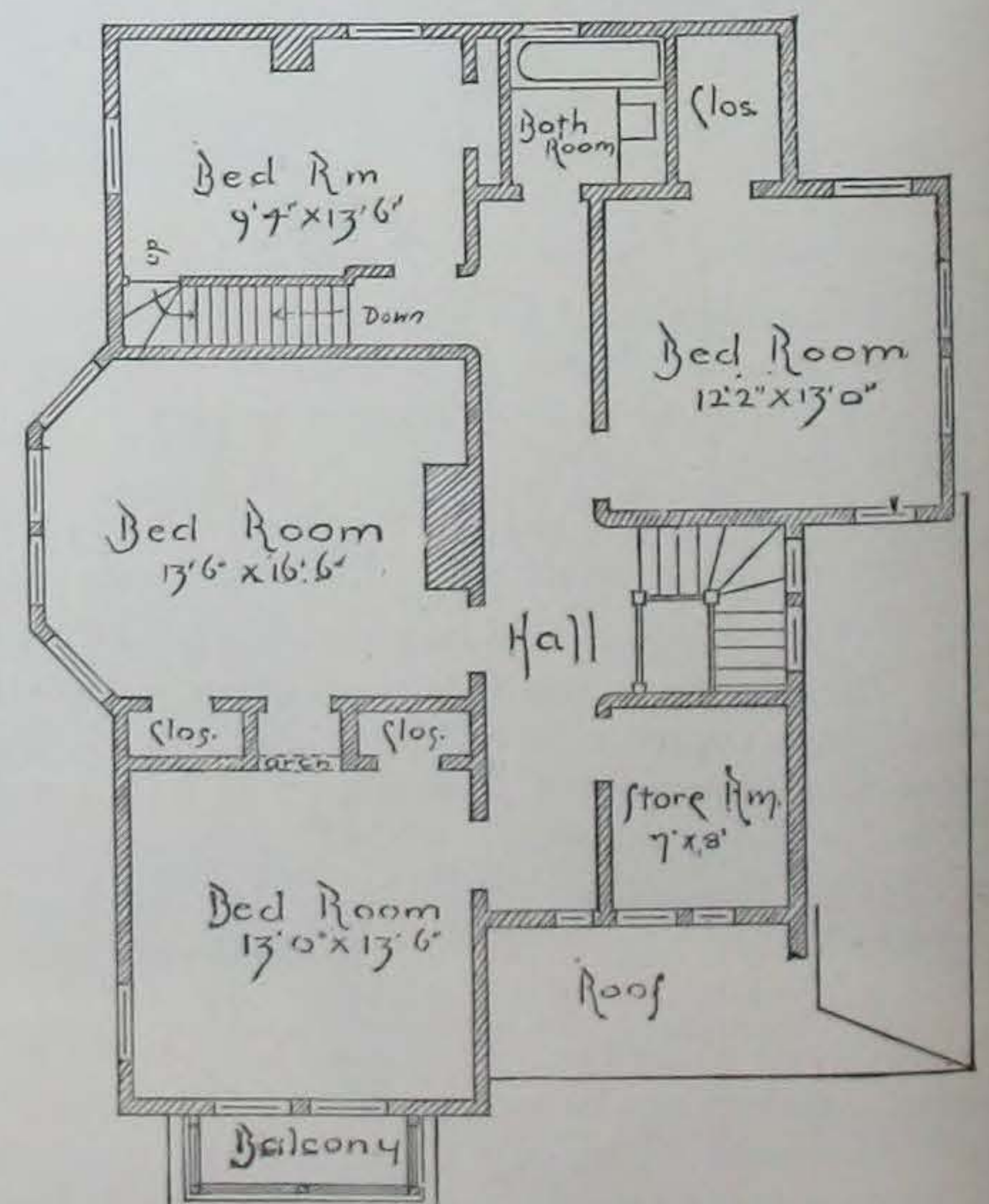
Sliding doors between parlor and sitting-room.

Large hall with fire-place, and a handsome stairway.

In the attic one bed-room is finished over the sitting-room, with windows opening on to the covered balcony; as shown by the perspective view the balcony or "look-out" is formed by carrying up the sitting-room bay.



FIRST FLOOR. NO. 349



SECOND FLOOR NO. 349



DESIGN No. 350. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 350

SIZE OF STRUCTURE: Front, 38 ft., 6 in. Side, 52 ft., 4 in., over all.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 10 ft., 6 in.; Second Story, 9 ft., 6 in.

MATERIALS: Foundation, brick piers; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Designed for erection in the South, this house has large, airy rooms and high ceilings.

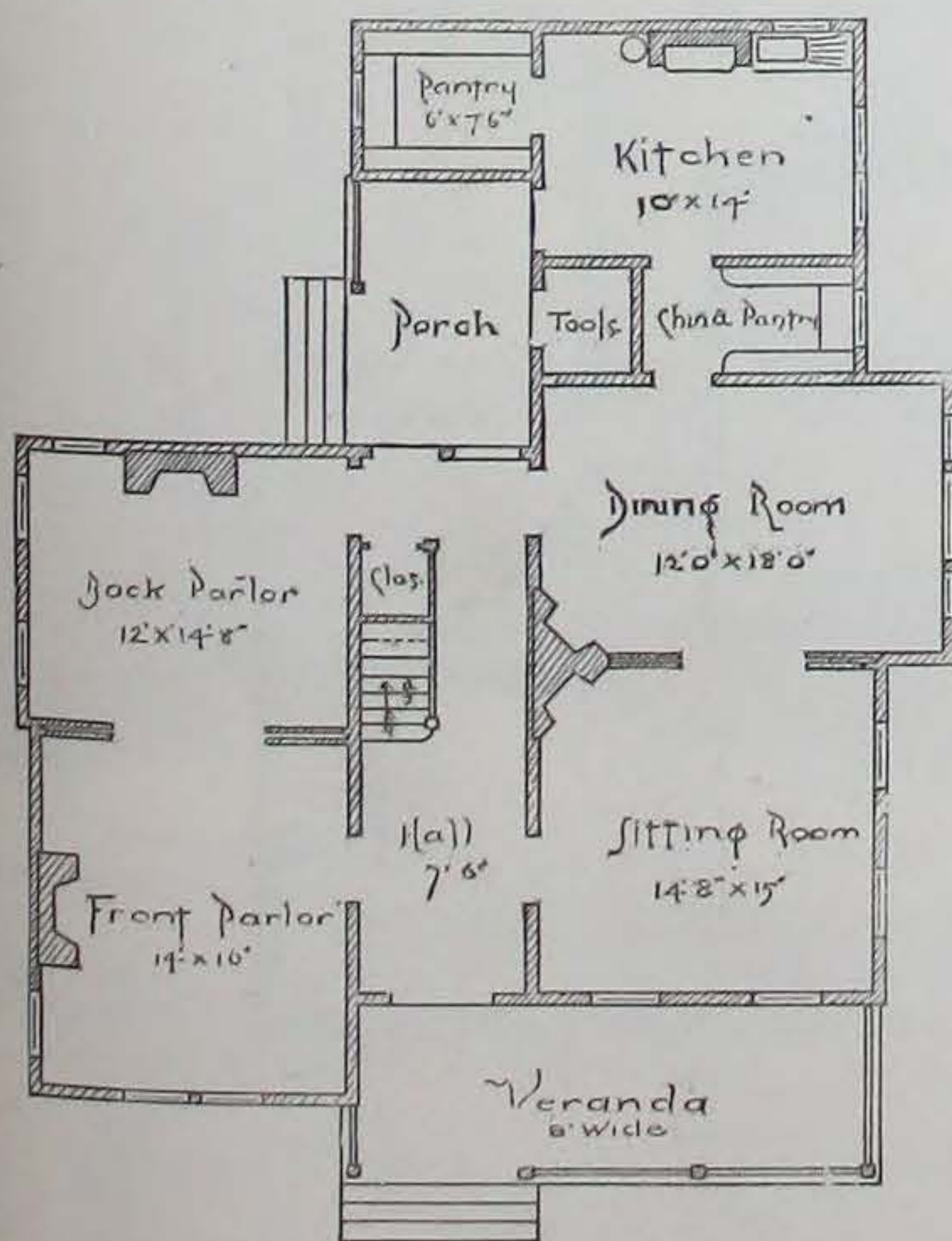
It has the hall in the centre, running through from front to rear, allowing a free and unobstructed circulation of air. The great popularity of the central hall in warm climates is evidence of its value.

Fire-places are provided in all the principal rooms. Large windows, and plenty of them.

The principal rooms of first story are connected by double sliding doors.

Three good bed-rooms and a bath-room in second story. The back-parlor can be used as a bed-room.

A cellar can be put under the whole house, with brick foundation walls, for about \$300 additional to the above estimate of cost.



FIRST FLOOR. NO. 350

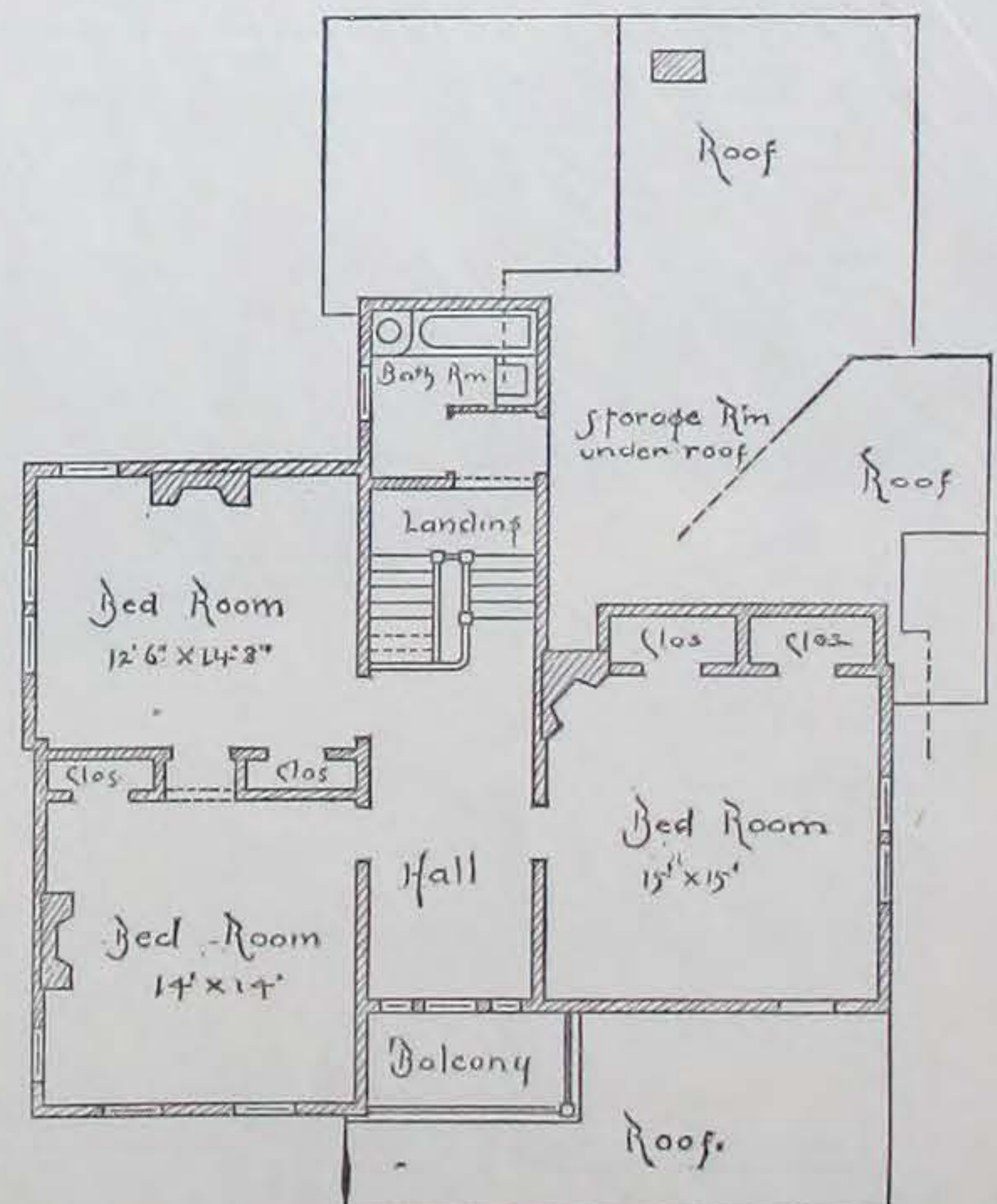
COST: \$3,800, complete, except mantels and kitchen range.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully



SECOND FLOOR. NO. 350



DESIGN No. 351. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 351

SIZE OF STRUCTURE: Front, 27 ft. Side, 44 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft., 6 in.; Second Story, 9 ft.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$4,000, complete, except mantels, kitchen range and heater.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the

cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Large hall with fire-place, and a handsome staircase.

The principal rooms connect by sliding doors. The parlor is heated by furnace.

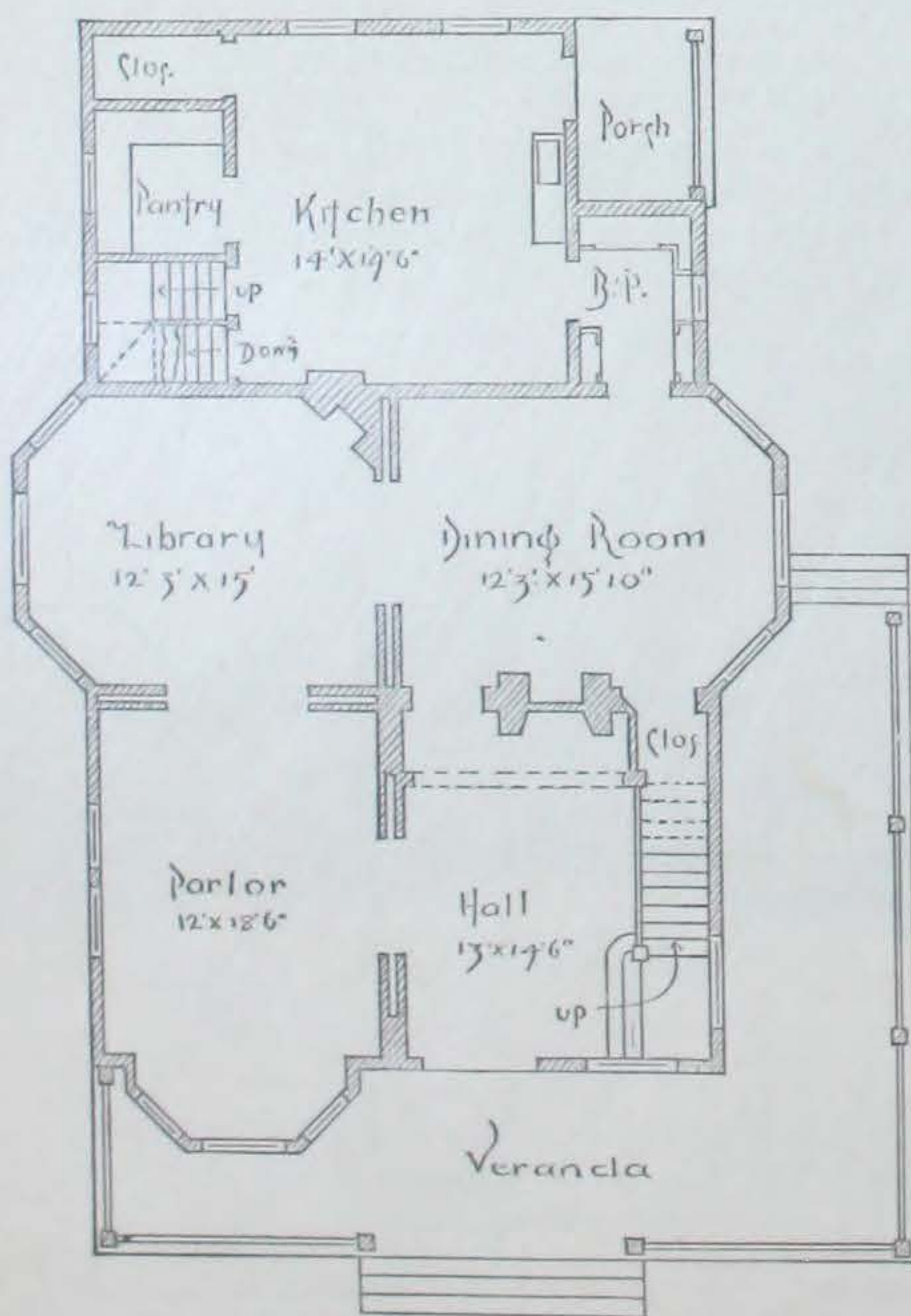
The veranda is 7 ft., 6 in. wide.

Large store pantry, butler's pantry, and closet for kitchen. Back stairway to second story.

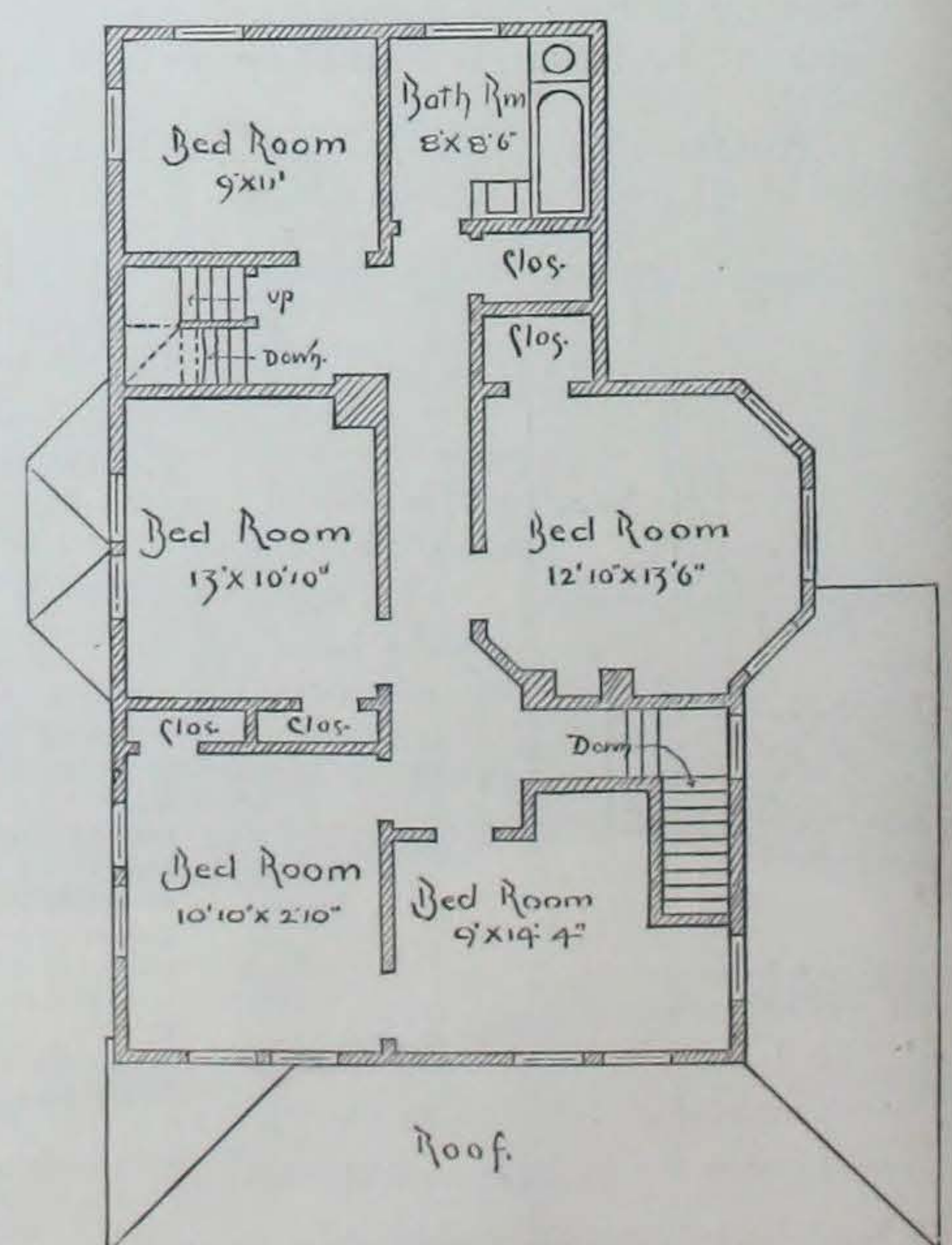
Fine bed-rooms and a bath-room in the second story, and space for three bed-rooms in the attic.

Cellar under the kitchen only.

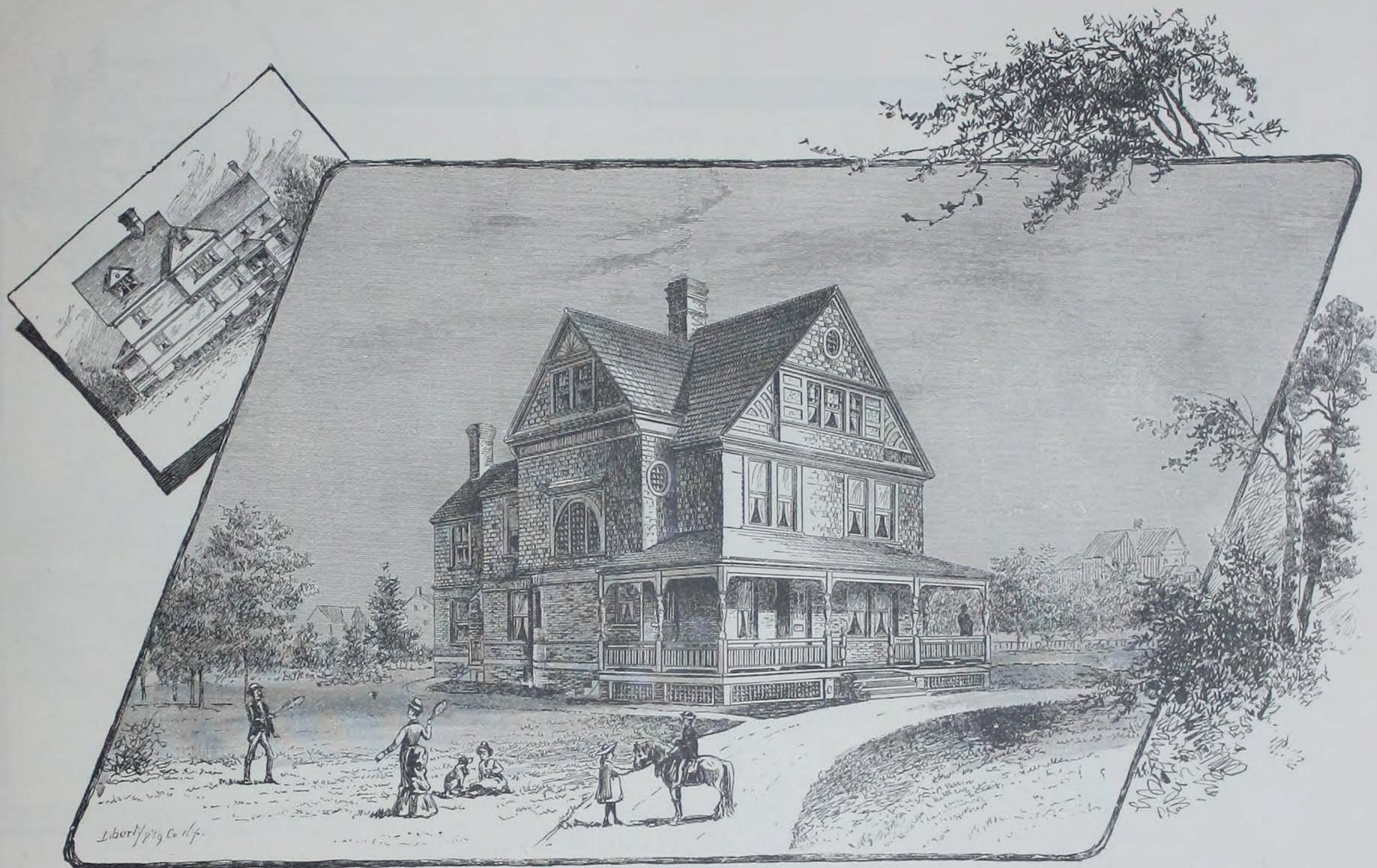
The figures given on the plan for the lengths of the parlor, library and dining-room, include the bay windows.



FIRST FLOOR. NO. 351



SECOND FLOOR. NO. 351



DESIGN No. 352. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 352

SIZE OF STRUCTURE: Front, 28 ft.; including veranda, 36 ft. Side, 53 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft., 6 in.; Second Story, 8 ft., 6 in. Attic Story, 8 ft., 6 in.

MATERIALS: Foundation, stone and brick; First Story, faced with select stock brick; Second Story, shingles; Gables, shingles and panels; Roof, slate.

COST: \$5,000, complete, except mantels, kitchen range and heater.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—Large fine hall entered from a vestibule; an alcove with seat and window.

Platform staircase set in a recess.

Fire-place in hall as well as in parlor, dining-room and library.

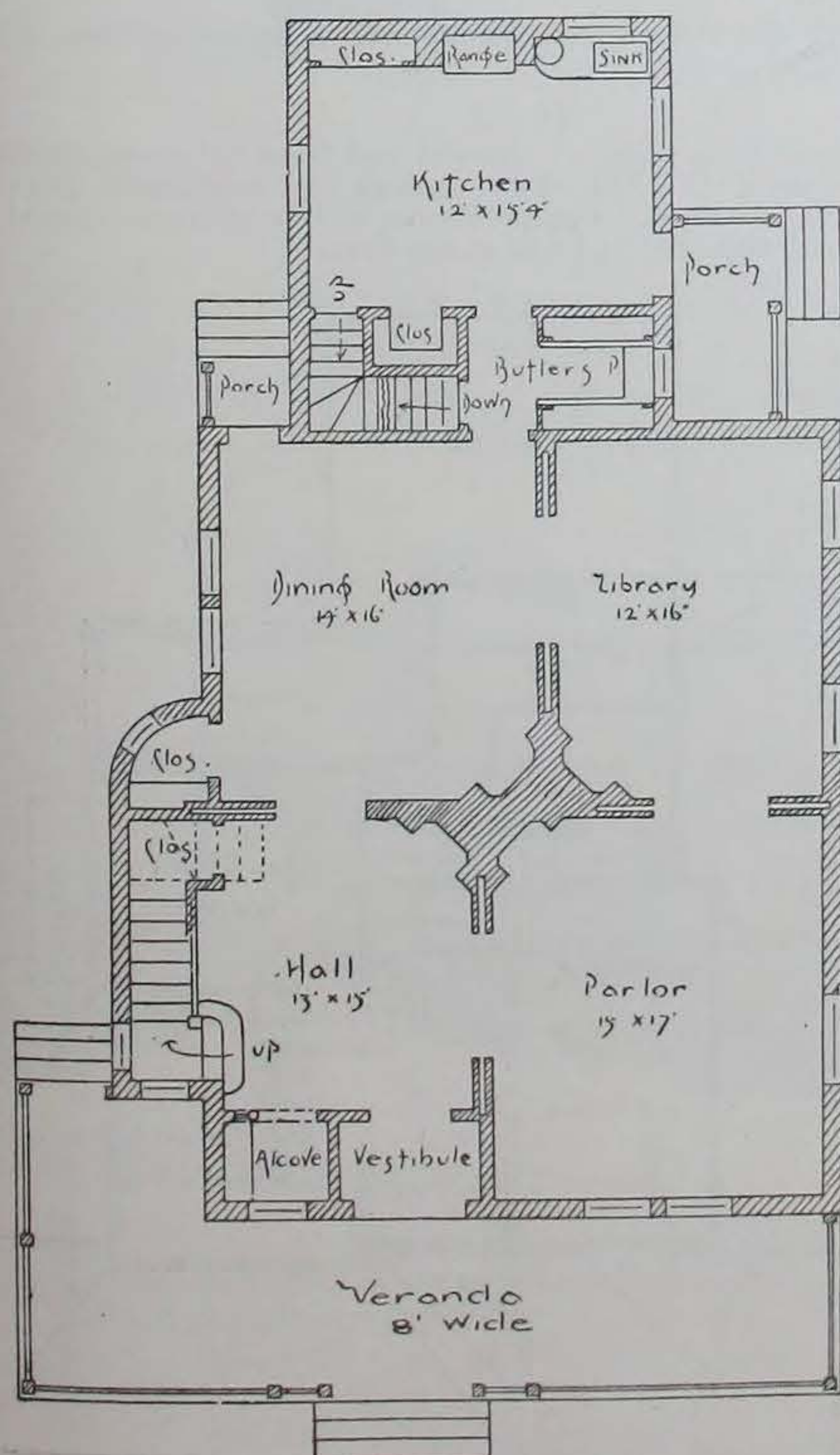
Large butler's pantry between the dining-room and kitchen.

Sliding doors connect all the principal rooms and hall of the first story.

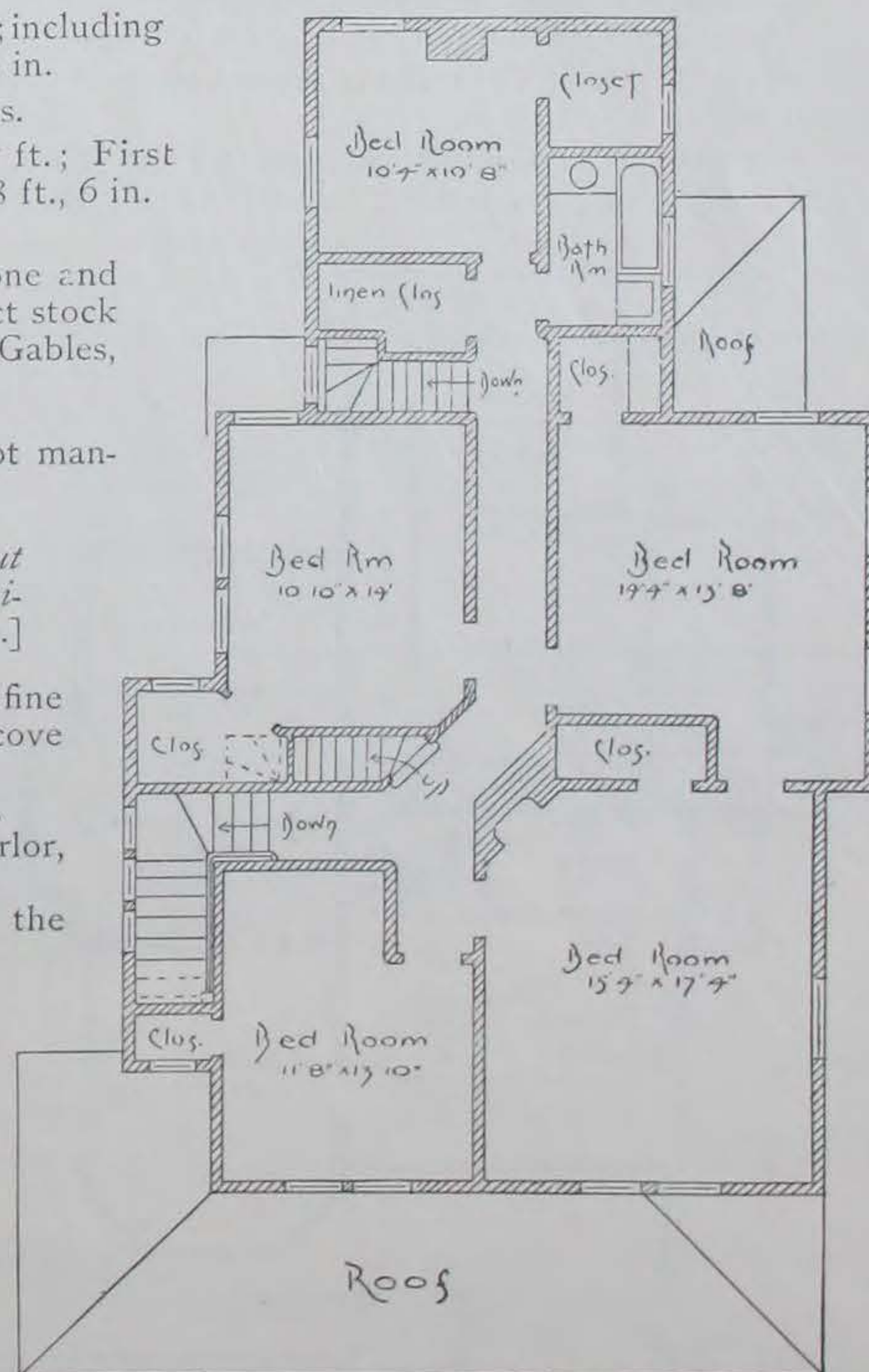
Back staircase to second story.

Five bed-rooms in the second story, and three in the attic, the front one being large, 14 x 19 feet.

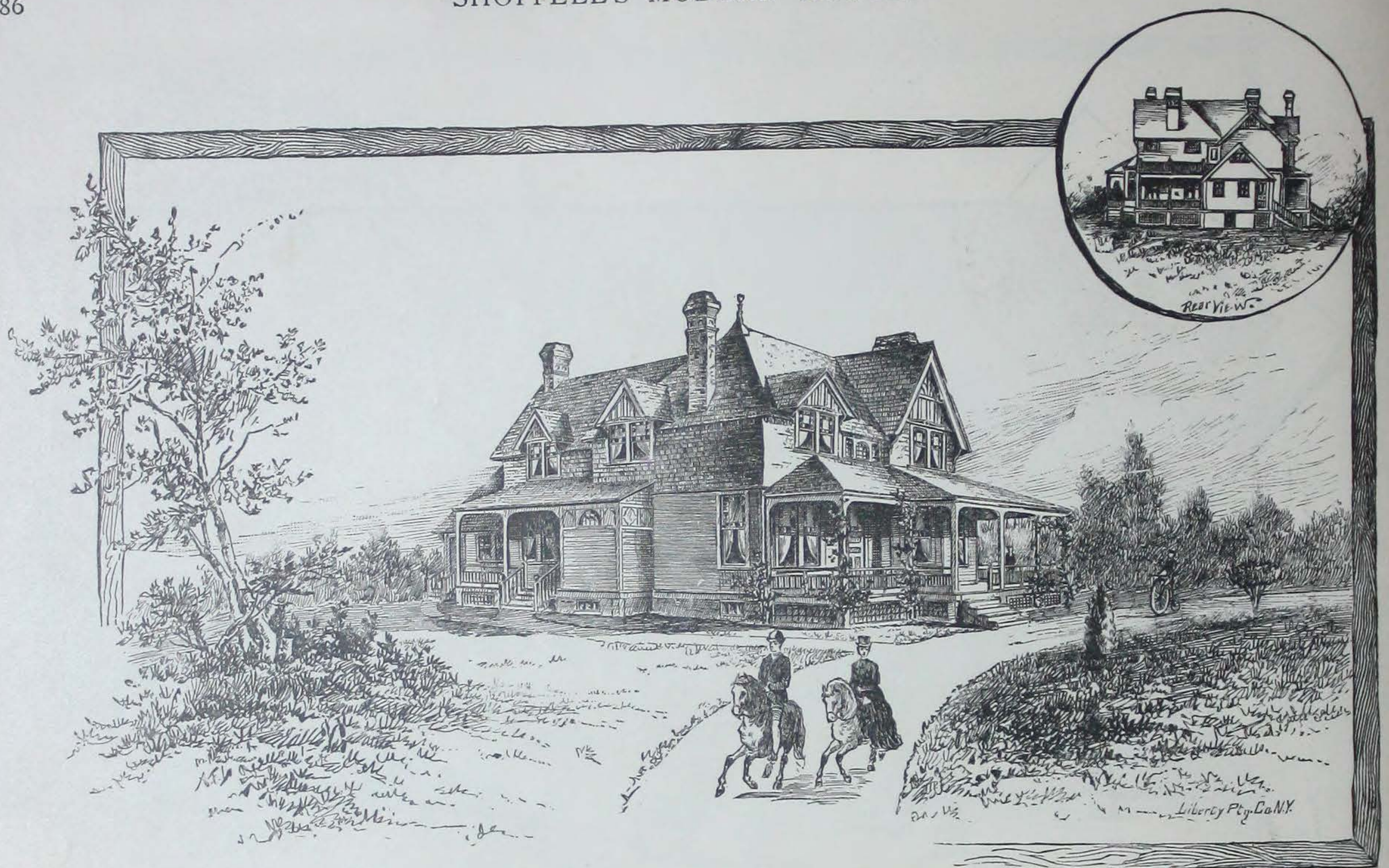
Cellar under the whole house, the rear part arranged for a laundry, with outside entrance to the yard.



FIRST FLOOR, NO. 352



SECOND FLOOR, NO. 352



DESIGN No. 353. PERSPECTIVE VIEW
DESCRIPTION OF DESIGN NUMBER 353

SIZE OF STRUCTURE: Front, 37 ft. Side, 68 ft., including front veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 8 ft.; First Story, 10 ft.; Second Story, 9 ft.; Height of walls in second story to point where slope of roof begins is 5 ft., 6 in.

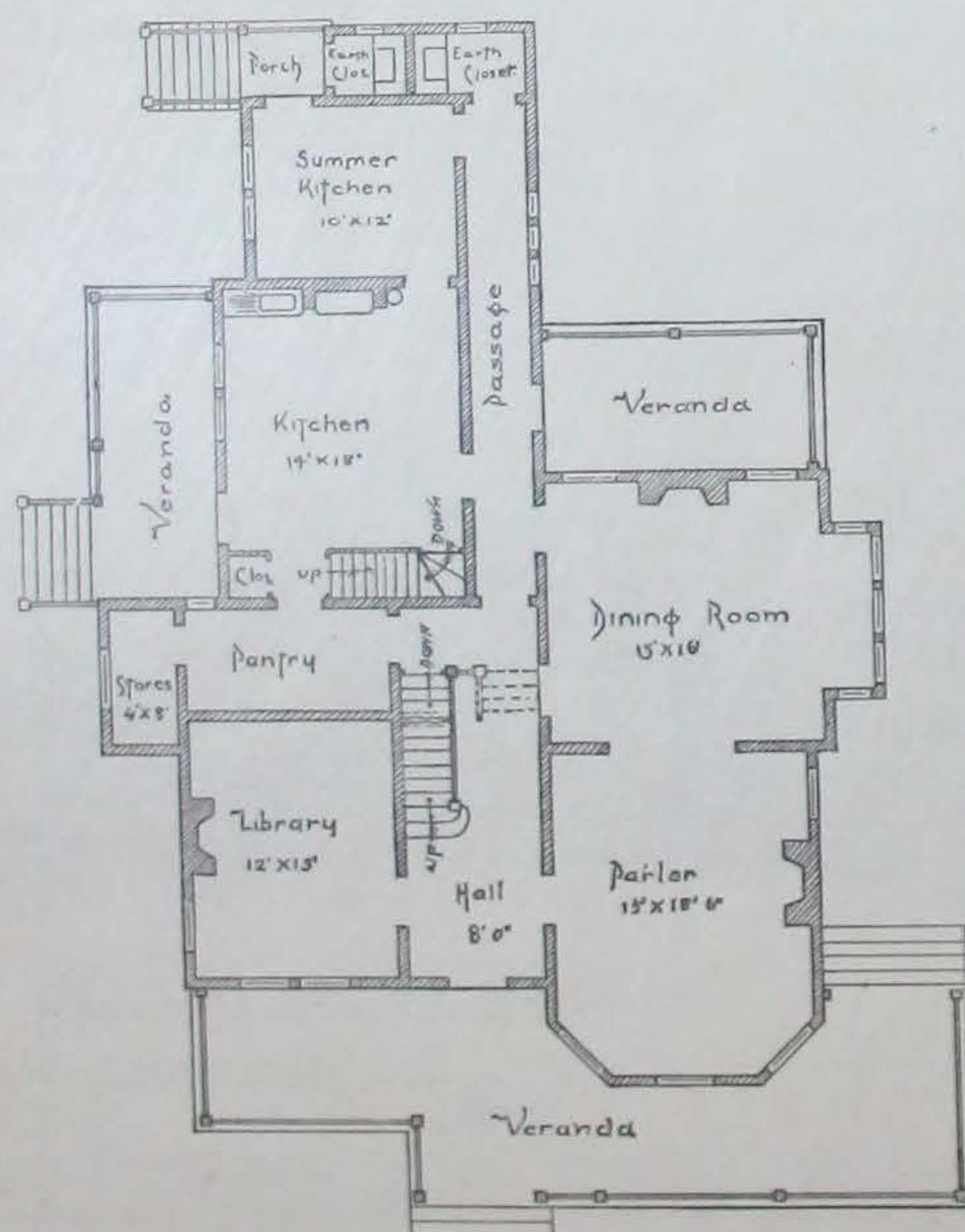
MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Gables, cement panels; Roof, shingles.

COST: \$4,600, complete, except mantels, kitchen range and furnace.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTE

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.



FIRST FLOOR. NO. 353

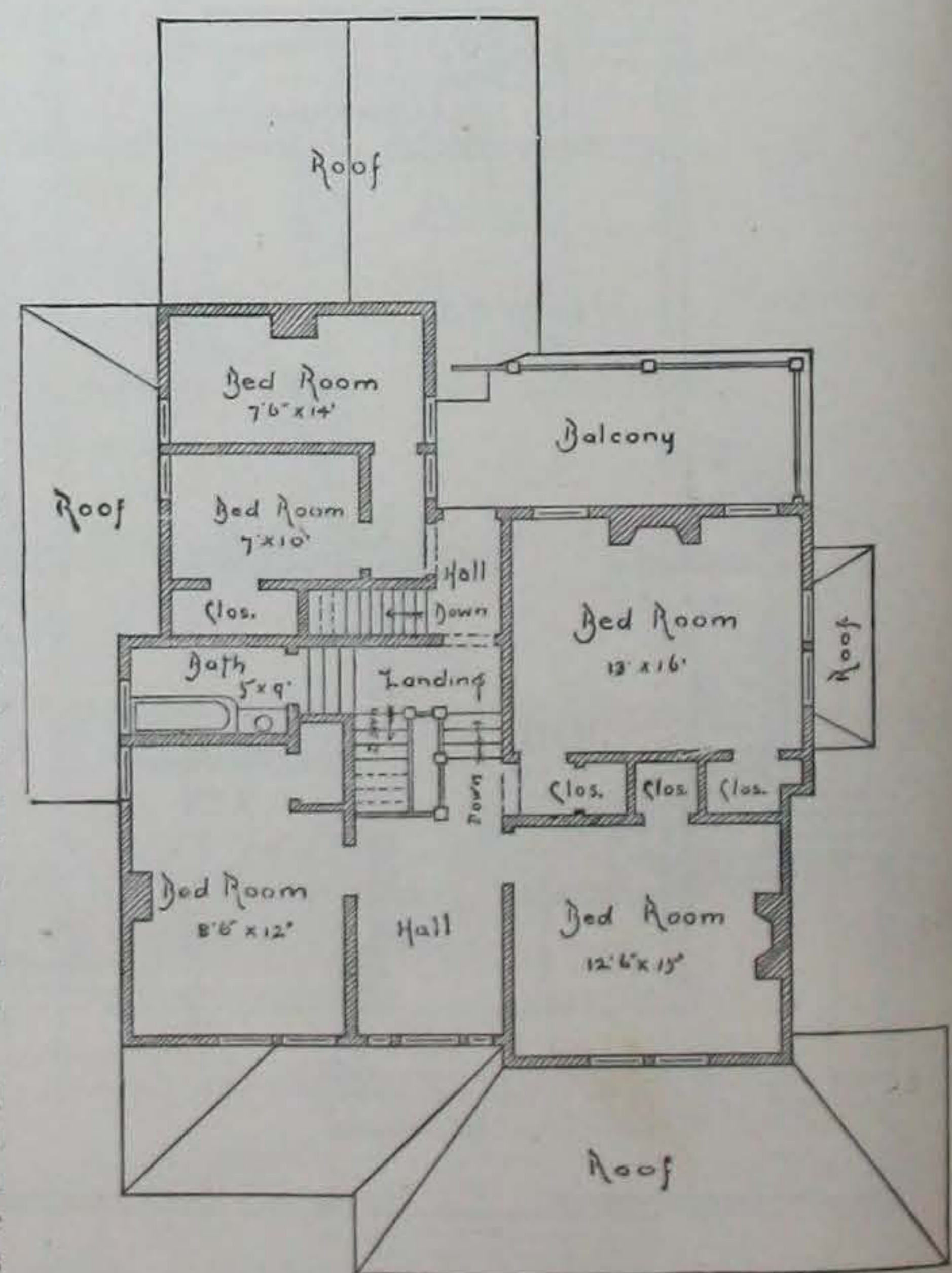
SPECIAL FEATURES.—Designed for erection in Canada, this house is well provided with means of heating; besides the powerful furnace, each of the principal rooms has a large open fire-place.

Large pantries and closets throughout. There is no plumbing in the house except that which is necessary for the kitchen. The earth closets in the rear part of first story, reached by the passage from the front hall, take the place of water-closets, with some advantages from a sanitary point of view.

Being so well provided with verandas, this would make an excellent house for a warm climate; the same provisions which make a warm house go far towards insuring a cool house during warm weather, or in a hot climate.

If built in the South the cellar should be omitted, reducing the cost materially.

From experience we have found that on account of the reduced cost of materials and labor in many of the Southern states, the cost of building is one-third less than our estimates.



SECOND FLOOR. NO. 353



DESIGN No. 354. PERSPECTIVE VIEW

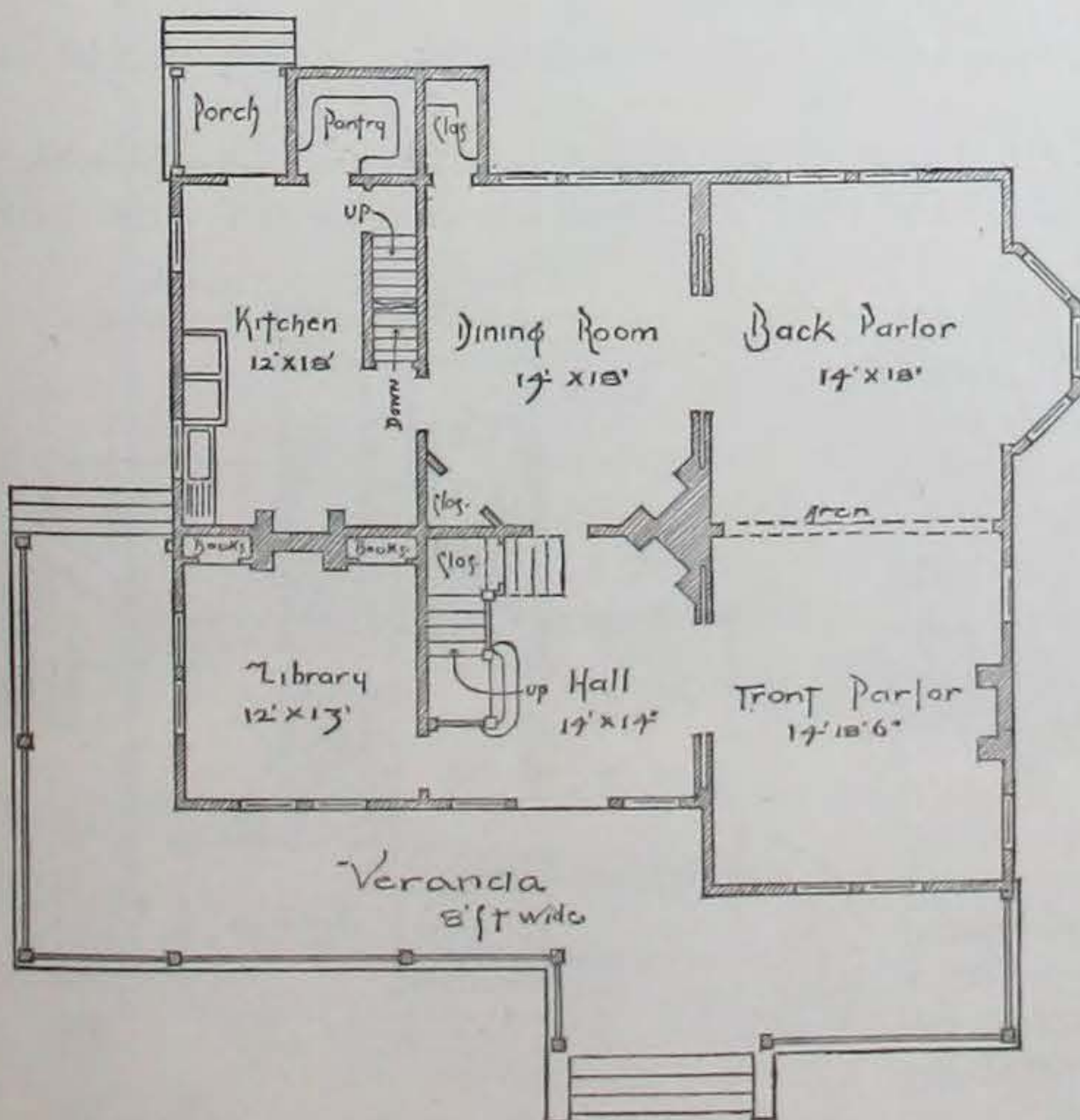
DESCRIPTION OF DESIGN NUMBER 354

SIZE OF STRUCTURE: Front, 43 ft., 4 in. Side, 38 ft.
SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft.; Attic Story, 8 ft., 6 in.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, clapboards; Gables and Tower, shingled; Roof, shingles.

COST: \$6,000, complete, except mantels, kitchen range, and heater.



FIRST FLOOR. NO. 354

Although not a large house the accommodations are generous, owing to the compact arrangement of rooms.

Square hall in the centre with fire-place and an attractive stairway.

Dining-room back of the hall with which the large double parlor communicates by sliding doors.

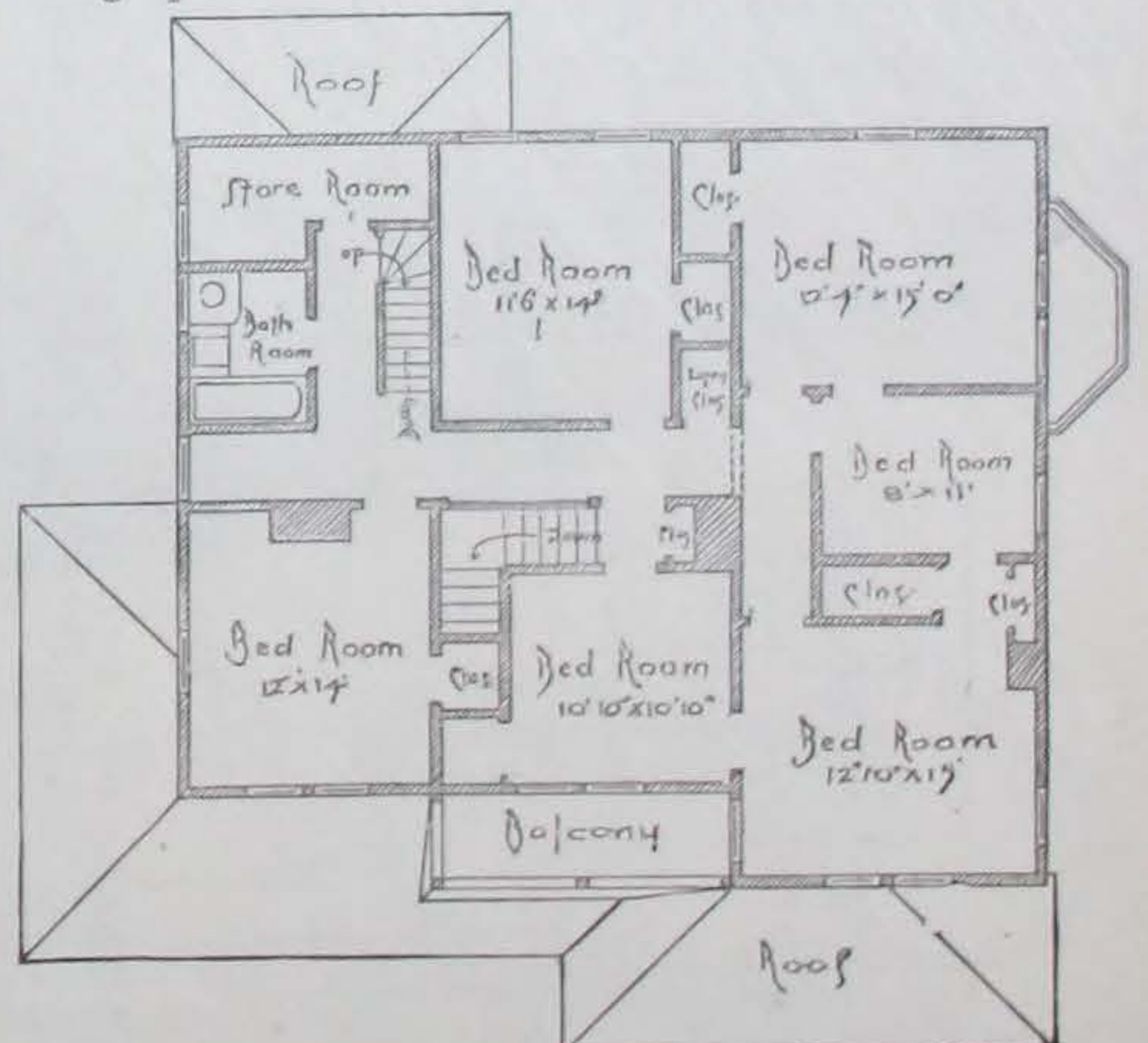
All the principal rooms of first story have open fire-places for grates or log fires. The second story contains six bed-rooms, a bath-room and a trunk room.

Two rooms are finished in the attic, the one in the tower being 12 x 14 ft., and the other 10 x 12 ft.

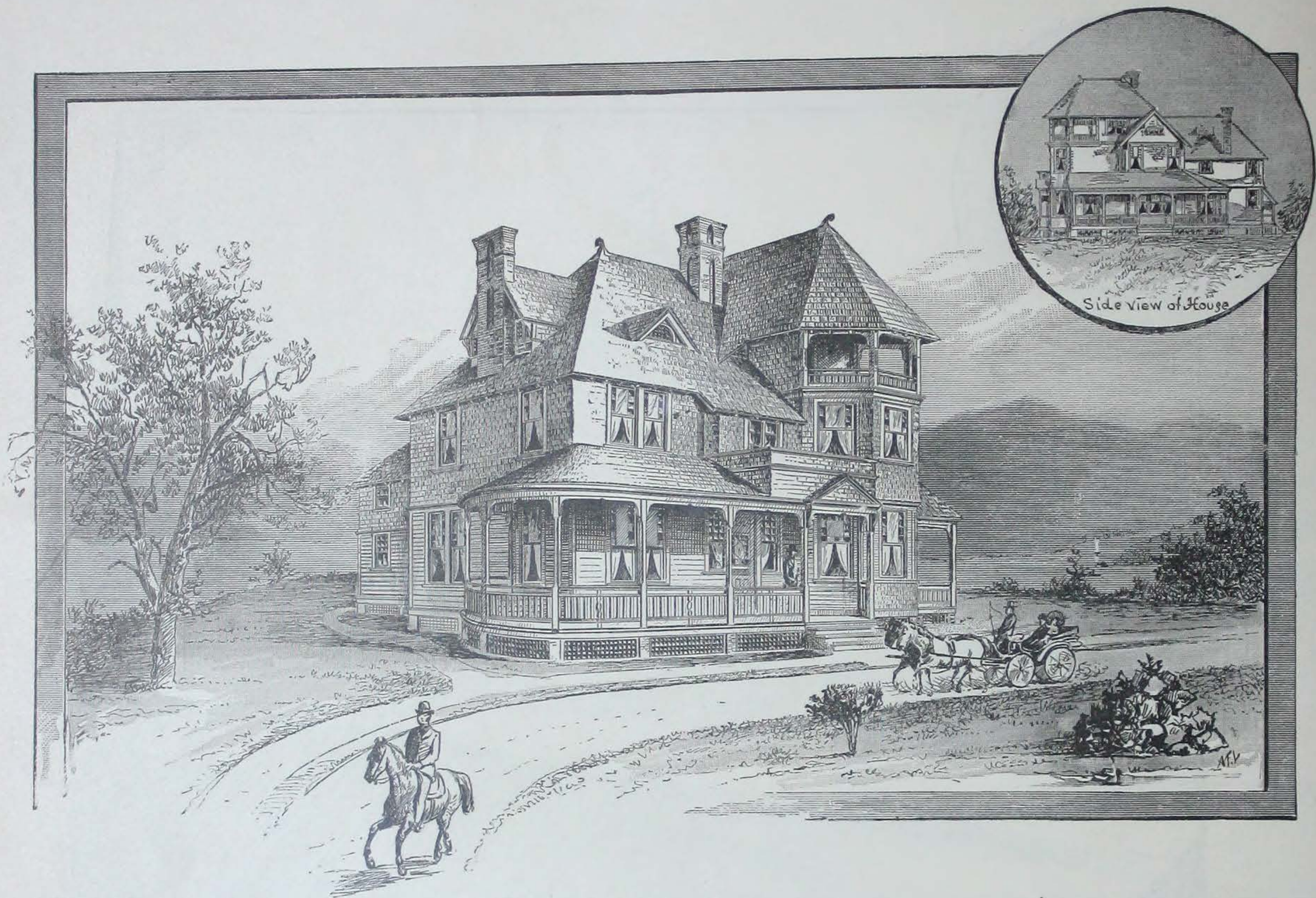
Cellar under the kitchen and dining-room. Stone walls underneath the whole house.

The veranda is eight feet wide.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]



SECOND FLOOR. NO. 354



DESIGN No. 355. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 355

SIZE OF STRUCTURE: Front, 43 ft., 4 in.; extreme width over all 66 ft. Side, 54 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 10 ft., 6 in.; Second Story, 9 ft., 6 in.; Attic Story, 8 ft., 6 in.

MATERIALS: Foundation, brick piers; First Story, clapboards; Second Story, shingles; Roof, shingles.

COST: \$5,000, complete, except mantels and kitchen range.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—This was designed for and is well adapted to a Southern climate.

Wide verandas, large rooms, stories of good height, and large open fire-places are features which the Southerner demands, because he knows the comforts and advantages of them.

The hall of this house is a noble one, 11 ft. wide and 26 ft. long, with a large open fire-place, and a handsome stairway.

The verandas are 9 ft. wide.

Large openings connect the rooms, insuring a free circulation of air.

The study or den gives the professional man a place in which to seclude himself for work, or makes a sewing-room for the lady of the house.

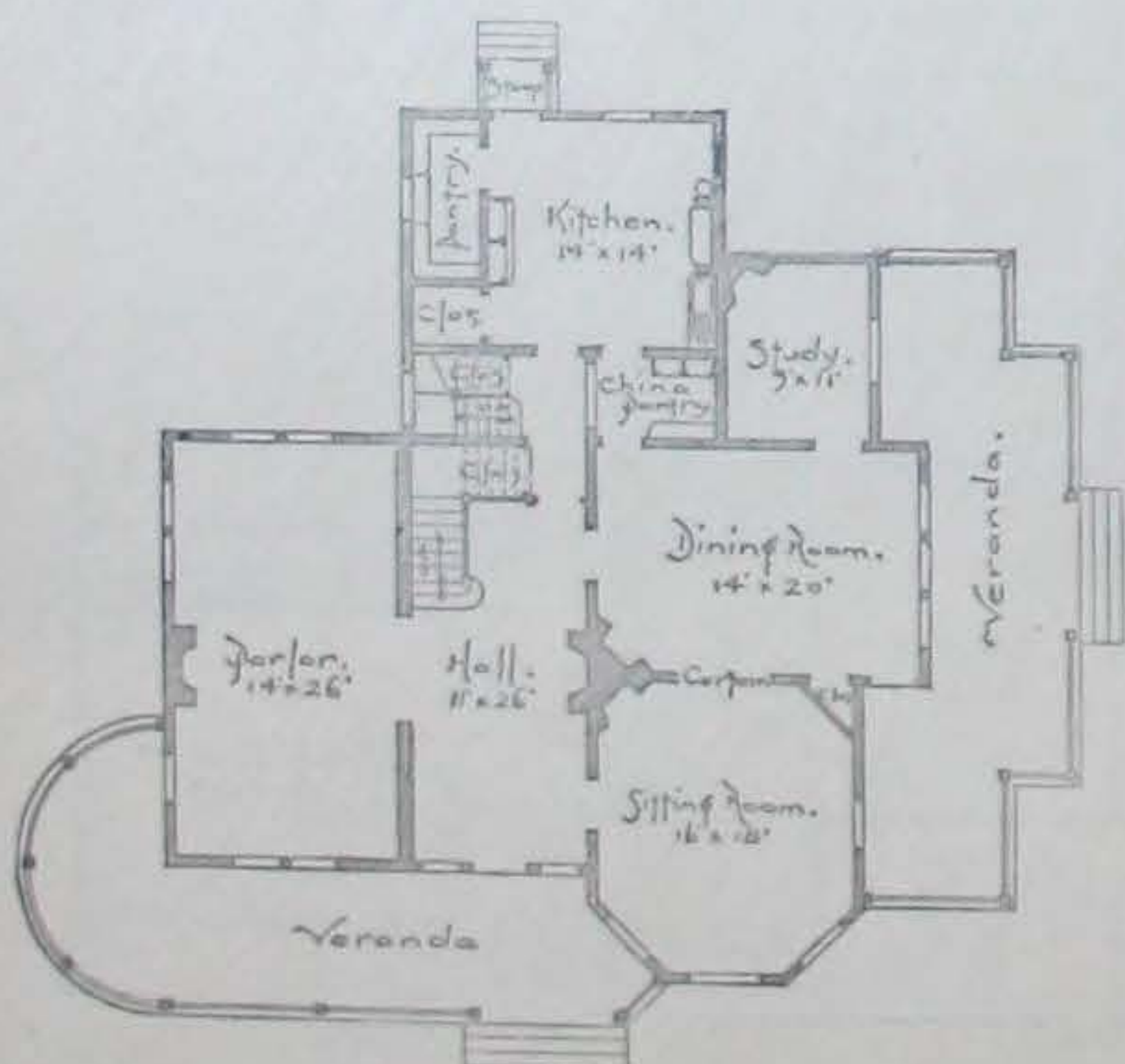
The second story provides four large and two smaller bed-rooms, and a sewing room. In the attic there are two bed-rooms, besides any amount of storage room.

By building a cellar under the house with brick or stone walls, this would make a good house for a Northern climate. This would cost about \$500 additional.

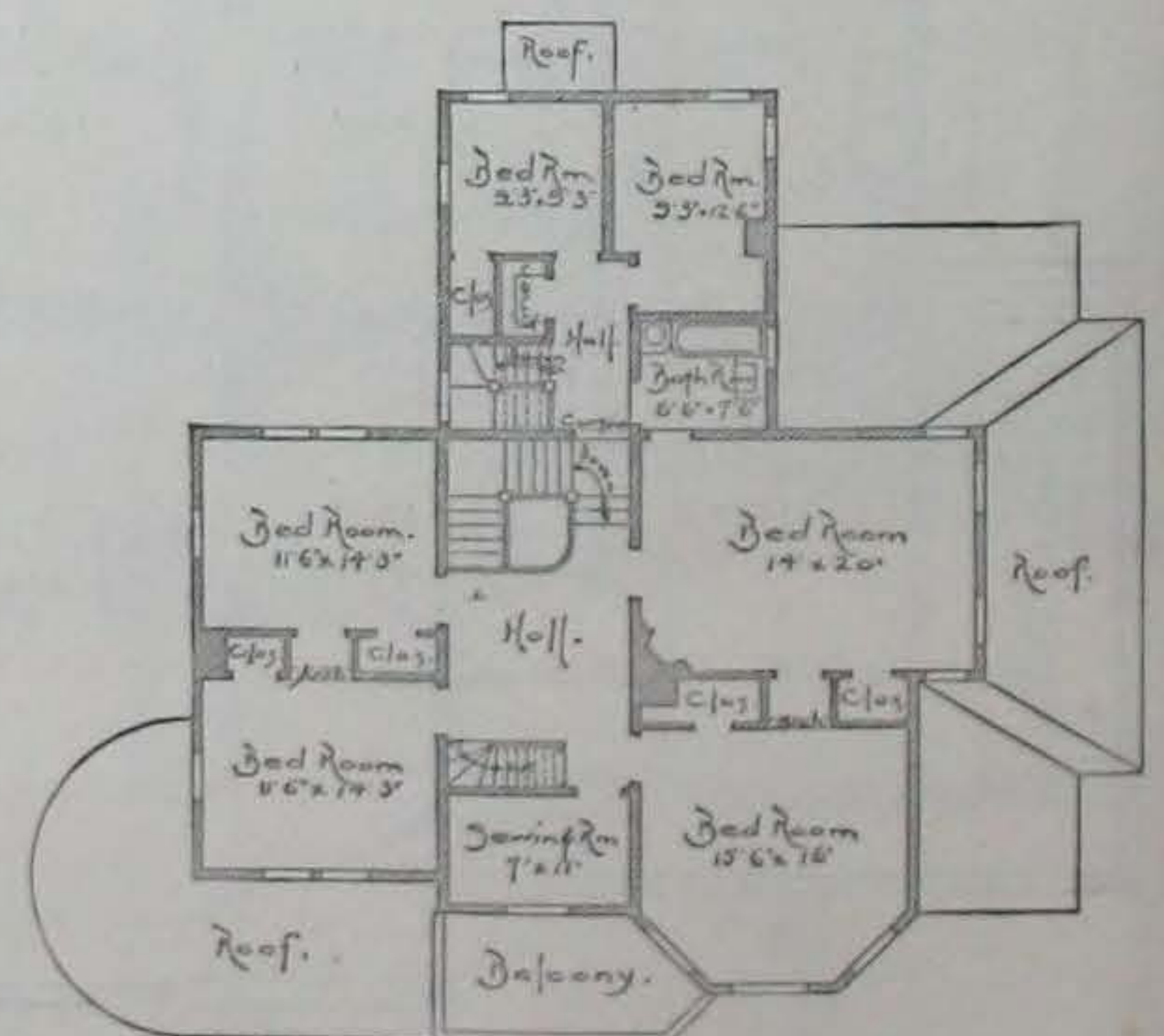
NOTES

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This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.



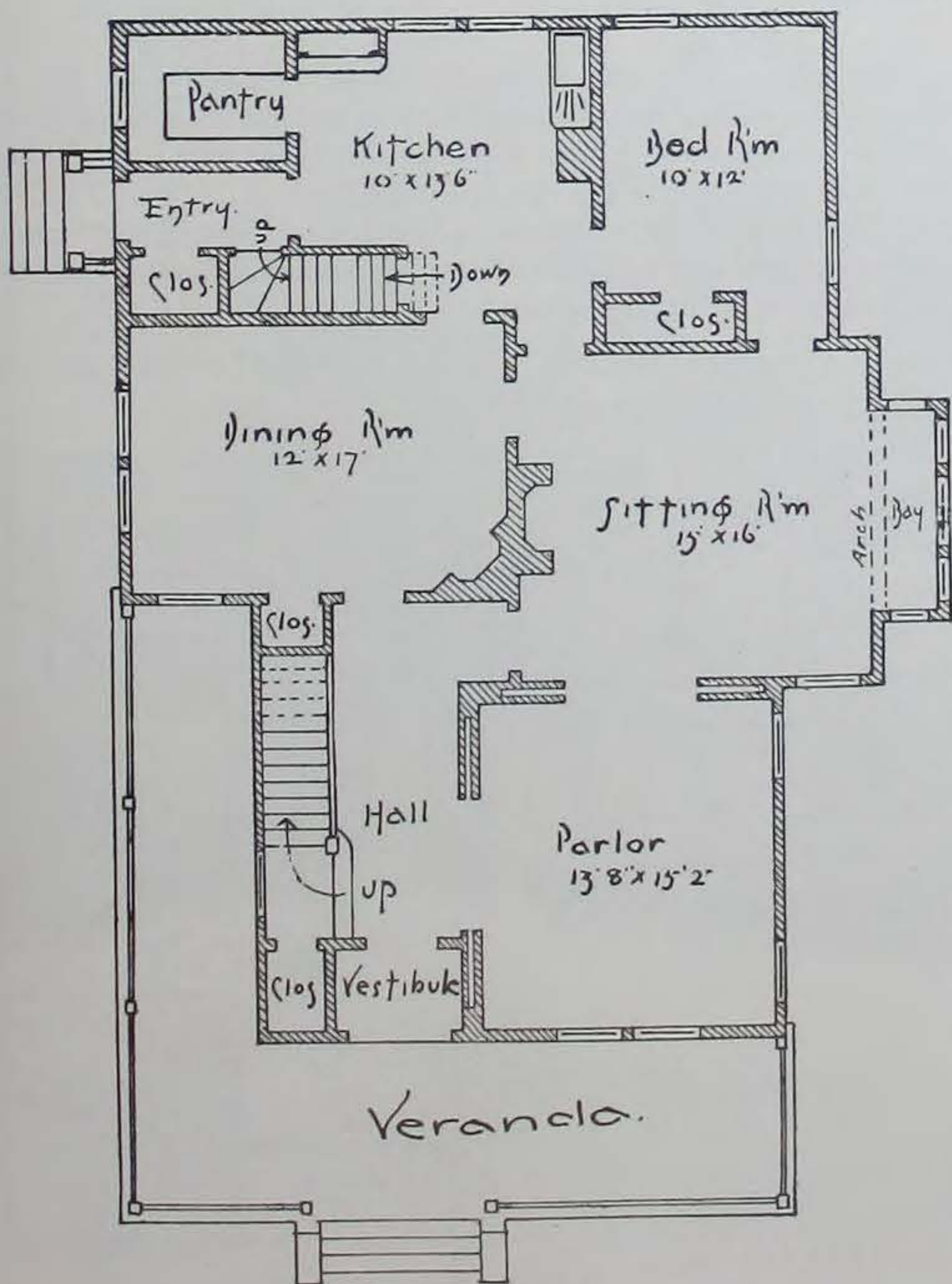
FIRST FLOOR. NO. 355



SECOND FLOOR. NO. 355



DESIGN No. 356. PERSPECTIVE VIEW
DESCRIPTION OF DESIGN NUMBER 356



FIRST FLOOR. NO. 356

SIZE OF STRUCTURE;
Front, 30 ft., including veranda. Side, 54 ft., 6 in., including front veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft., 6 in.; Second Story, 9 ft.; Attic Story, 8 ft.

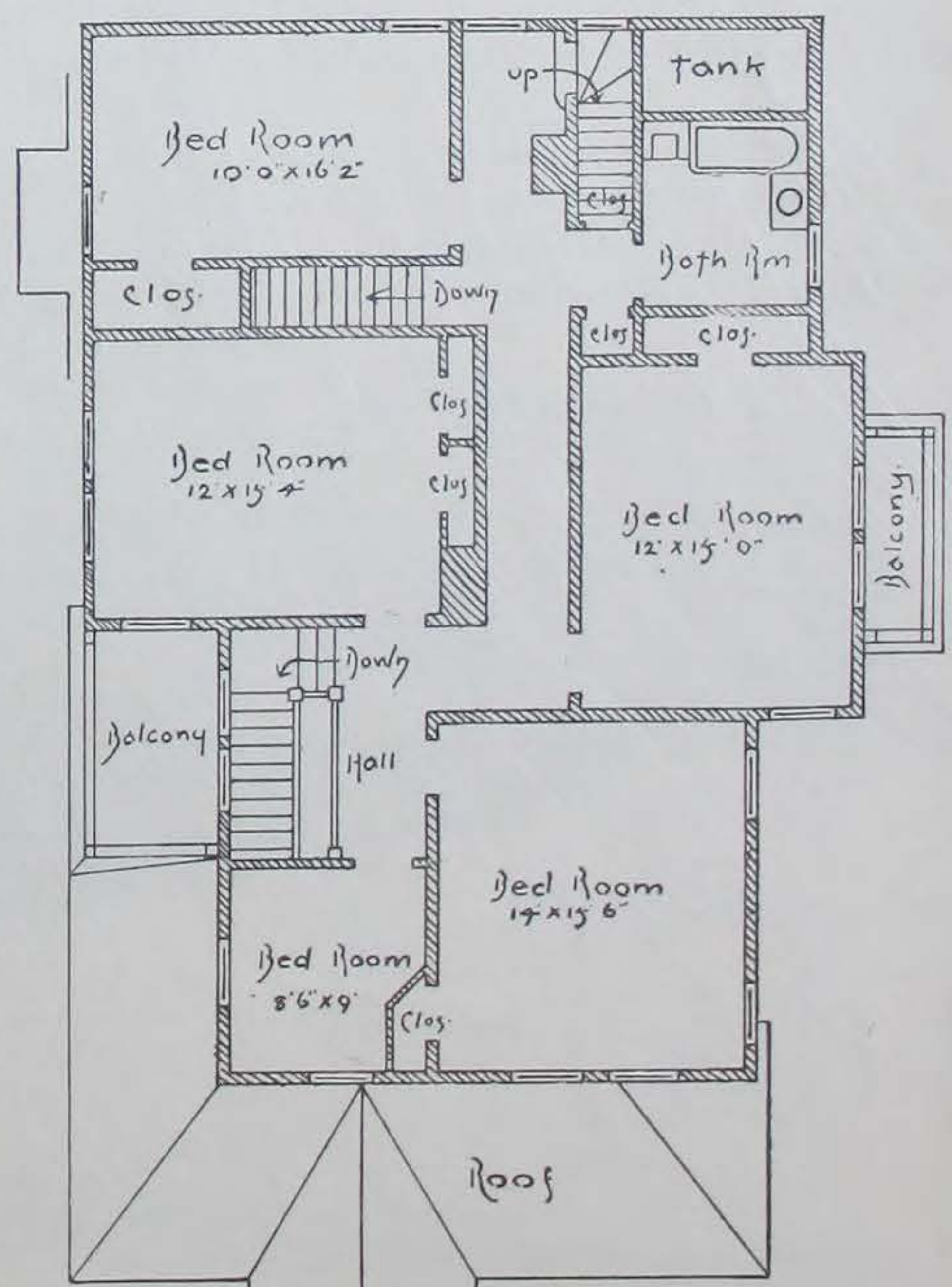
MATERIALS: Foundation, stone; First Story, clapboards; Second Story, clapboards and shingles; Roof, shingles.

COST: \$4,500, complete, except mantels, kitchen range and heating apparatus.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—Sliding doors between hall and parlor, and between parlor and sitting-room.

The bed-room on first floor is often wanted where there are elderly people in the family, or where there is an invalid.



SECOND FLOOR. NO. 356



DESIGN No. 357. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 357

SIZE OF STRUCTURE: Front, 36 ft., 6 in., including veranda. Side, 48 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft. 6 in.; Second Story, 9 ft.; Attic Story, 8 ft.

MATERIALS: Foundation, stone and brick; First Story, selected stock brick; Second Story, shingles and panelling; Roof, slate.

COST: \$5,500, complete, except mantels, kitchen range and heater.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Win-

dows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

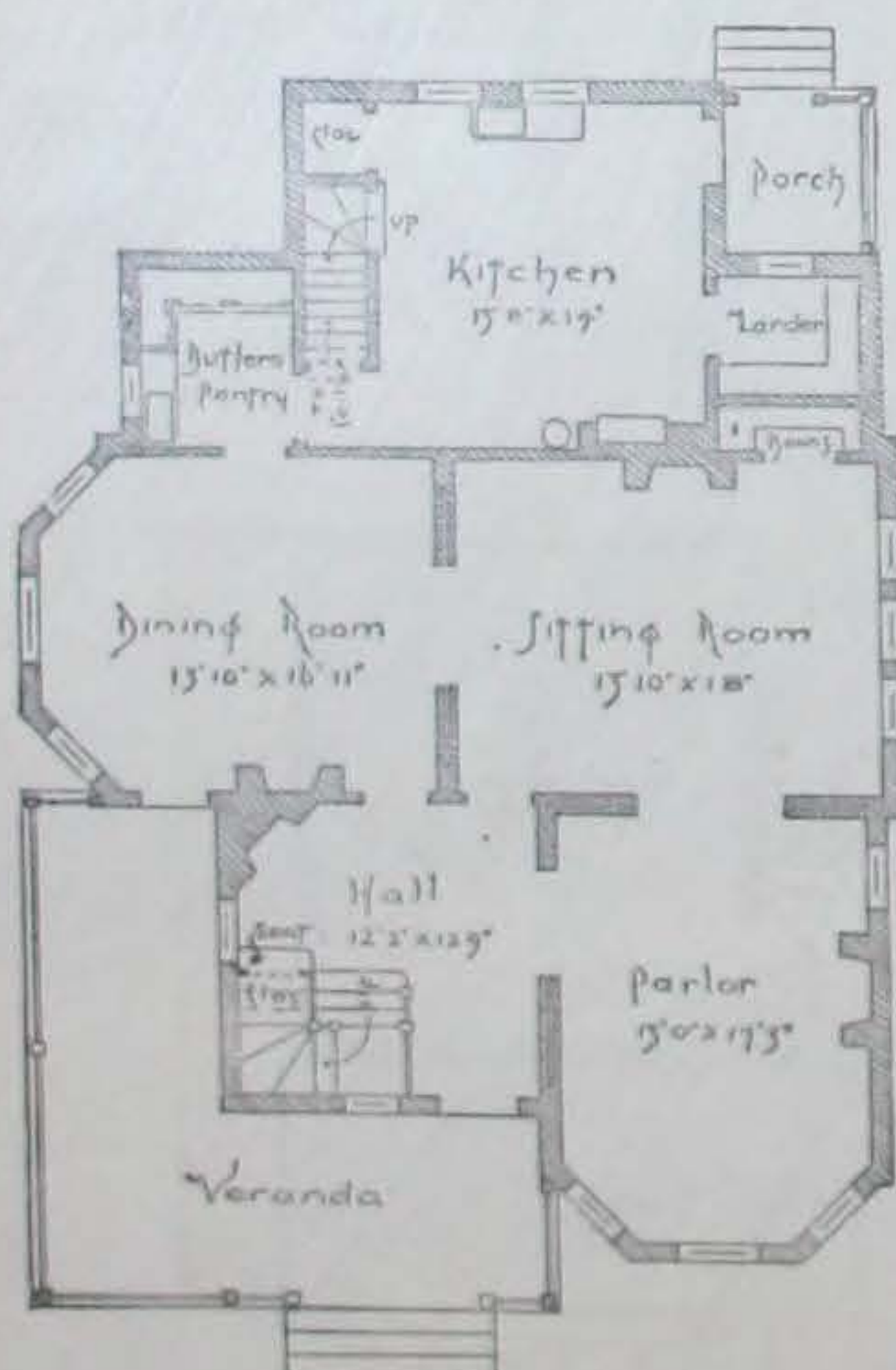
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—In the arrangement of rooms all the space is utilized to the best advantage.

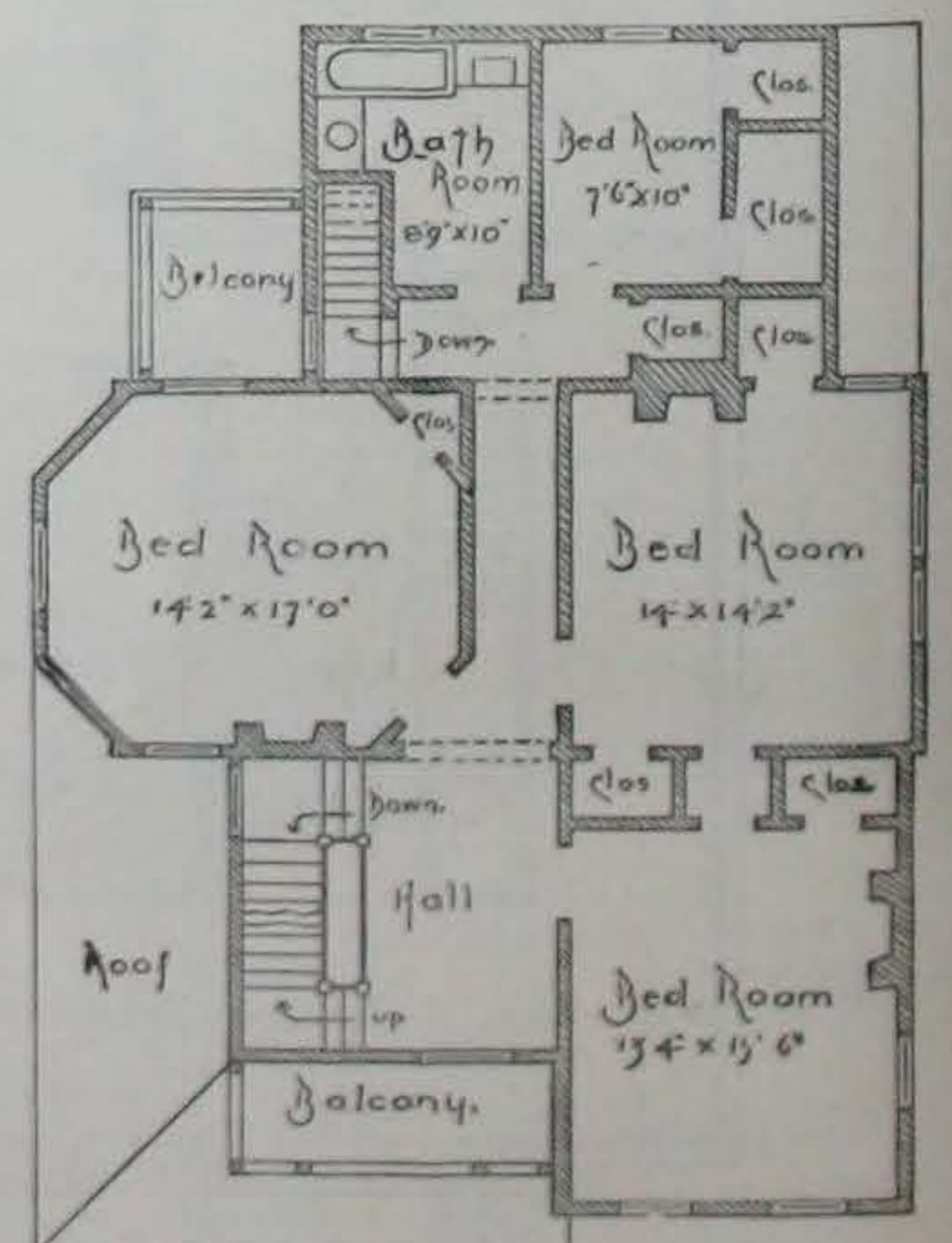
Large sliding doors connect all the rooms of first story.

The veranda is 8 feet wide both at the front and on the side where it returns to meet the projection of the dining-room.

The staircase, which is of handsome design, starts near the centre of the hall and ascends toward the front four steps to a platform, where it turns in the reverse direction; under the upper part of the staircase a recess or nook is formed where there is an angle fire-place, a window and a seat opposite the fire-place—just the place to sit and



FIRST FLOOR. NO. 357



SECOND FLOOR. NO. 357

enjoy a book and be altogether snug and comfortable on a winter's day.

The dining-room, sitting-room and parlor each have an open fire-place.

The butler's pantry, between the kitchen and dining-room, is 6 x 8 ft., and is properly fitted up with cupboards, drawers and a sink where the fine china can be washed.

The kitchen has a "larder" or store-closet besides a closet for brooms, etc.

Back stairs to the second story start from the kitchen, and underneath these the stair to the cellar descends.

The back porch is covered by the main roof of the house. In the second story the hall is large and the front window opens on to the balcony over the veranda, which will be seen in the perspective view. The view shows the balcony open, but large glazed sashes are provided which slide up and out of sight behind the spindle work of the upper part, so that when cold weather arrives the sashes can be lowered and made tight and then a conservatory is formed to which a heater pipe is carried.

Three large bed-rooms and one small one are obtained in the second story; large closets throughout.

The bath-room is large and contains water-closet, bath-tub and wash-basin. The plumbing is of the best description.

The roof of the butler's pantry forms another balcony for the second story and is covered by the main roof of the house.

The front entrance door and the door to the veranda from the dining-room are "Dutch doors," so called; they are divided horizontally about four feet above the floor, and the lower and upper part open independently of each other, or they can be secured together so that they will open together. The upper parts of these doors are glazed with small squares of plate glass.

Cellar under the whole house, the walls laid in cement mortar. The part under the kitchen is partitioned off for a laundry, and provided with a board floor. The whole of the cellar bottom is concreted.

Below will be found a design showing another exterior for the same plans.

DESCRIPTION OF DESIGN NUMBER 358

COST: \$5,800, except mantels, kitchen range and heater.

The floor plans are exactly the same in size and arrangement as those of the preceding design, except that on the first floor, the

veranda has an octagonal bay, and on the second floor the front balcony is made a bed-room 9 ft. x 13 ft., and an open balcony is put on the side, over the veranda.



DESIGN No. 358. PERSPECTIVE VIEW



DESIGN No. 359. PERSPECTIVE VIEW
DESCRIPTION OF DESIGN NUMBER 359

SIZE OF STRUCTURE: Front, 35 ft., including veranda. Side, 48 ft., 6 in., including front veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft., 6 in.; Second Story, 9 ft.; Attic Story, 9 ft.

MATERIALS: Foundation, stone; First Story, rock face stone work; Second Story, select stock brick; Gables, shingles and panelling; Roof, slate.

COST: \$5,500, complete, except mantels, kitchen range and heating apparatus.

Sliding doors connect the principal rooms and the hall.

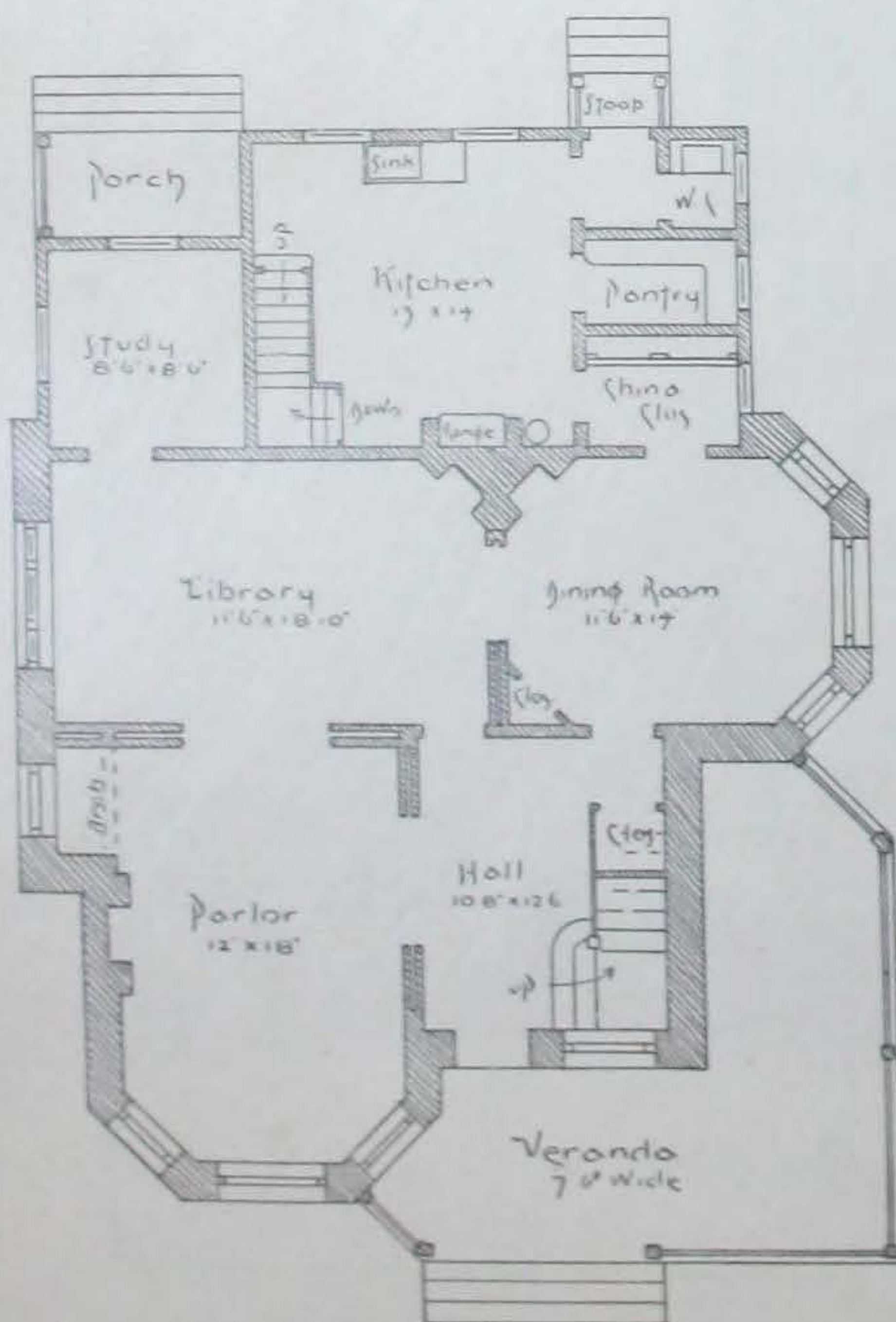
The window in the study, opening on to the porch, is carried to the floor.

Fire-places in the parlor, library, dining-room and front bed-room.

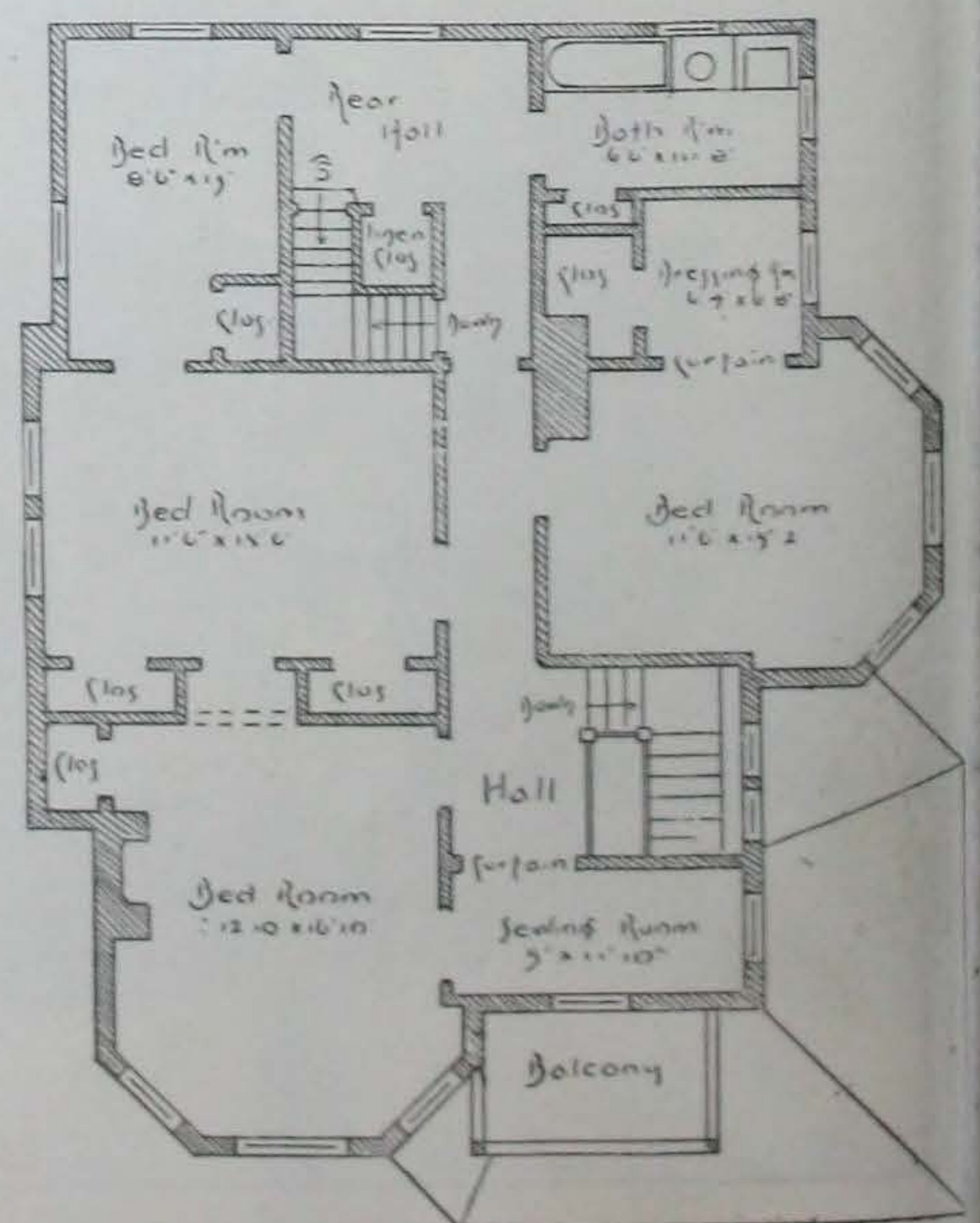
Three rooms finished in the attic.

Cellar under the whole house, with laundry in the rear.

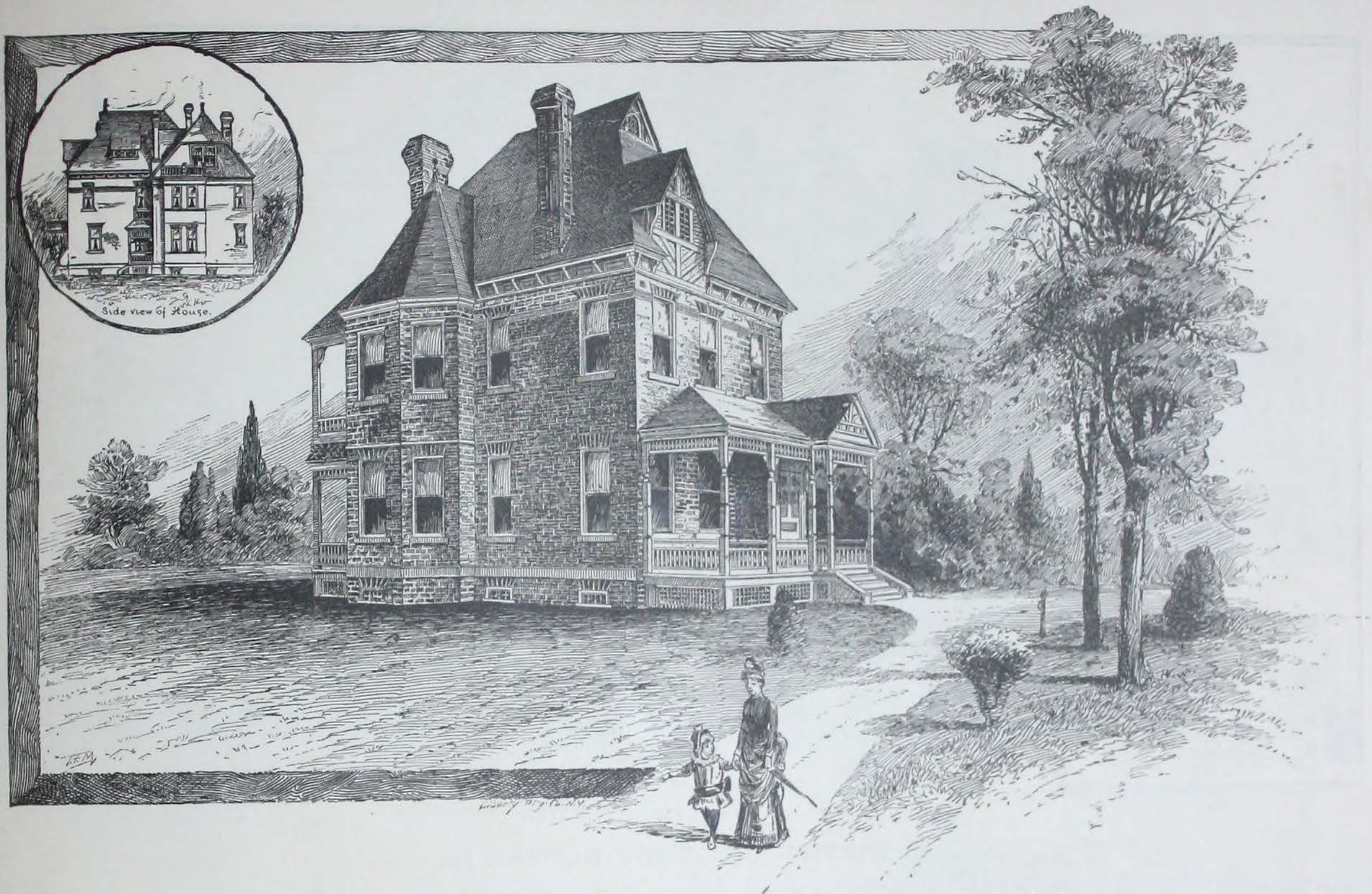
[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]



FIRST FLOOR. NO. 359.



SECOND FLOOR. NO. 359.



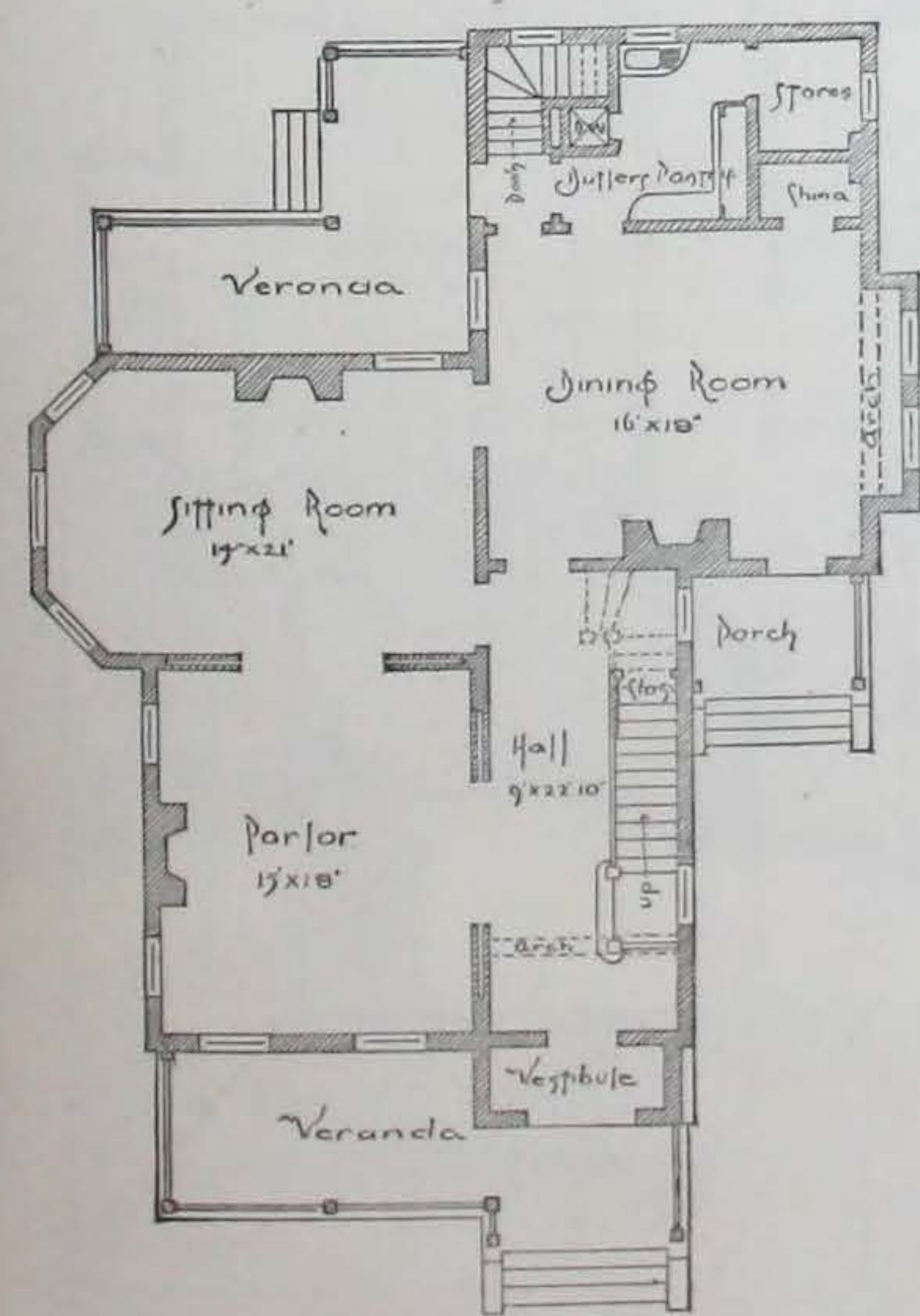
DESIGN No. 360. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 360

SIZE OF STRUCTURE: Front, 26 ft., 6 in.; extreme width, 43 ft. Side, 54 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft., 6 in.; First Story, 11 ft., 10 in.; Second Story, 10 ft., 10 in.



FIRST FLOOR. NO. 360

MATERIALS: Foundation, stone and brick; First Story, frame, veneered with brick; Second Story, frame, veneered with brick; Roof, slate.

COST: \$7,000, complete, except mantels, kitchen range and furnace.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—In construction the ordinary wood frame is used but it is covered with a 4-inch brick wall or shell, made secure to the frame by many small iron strap anchors built into the brickwork and attached to the frame.

In the cold climate of Canada, this method of building is much practiced and is found to make a warm house. The same conditions which make a warm house for Canada will make a cool house for Georgia or Mississippi. While the brickwork makes a tight and warm coat for the house, the air spaces between the brickwork and plastering of the walls prevent dampness.

This particular house was designed for erection in North Carolina, and has large rooms, high stories, and open fire-places.

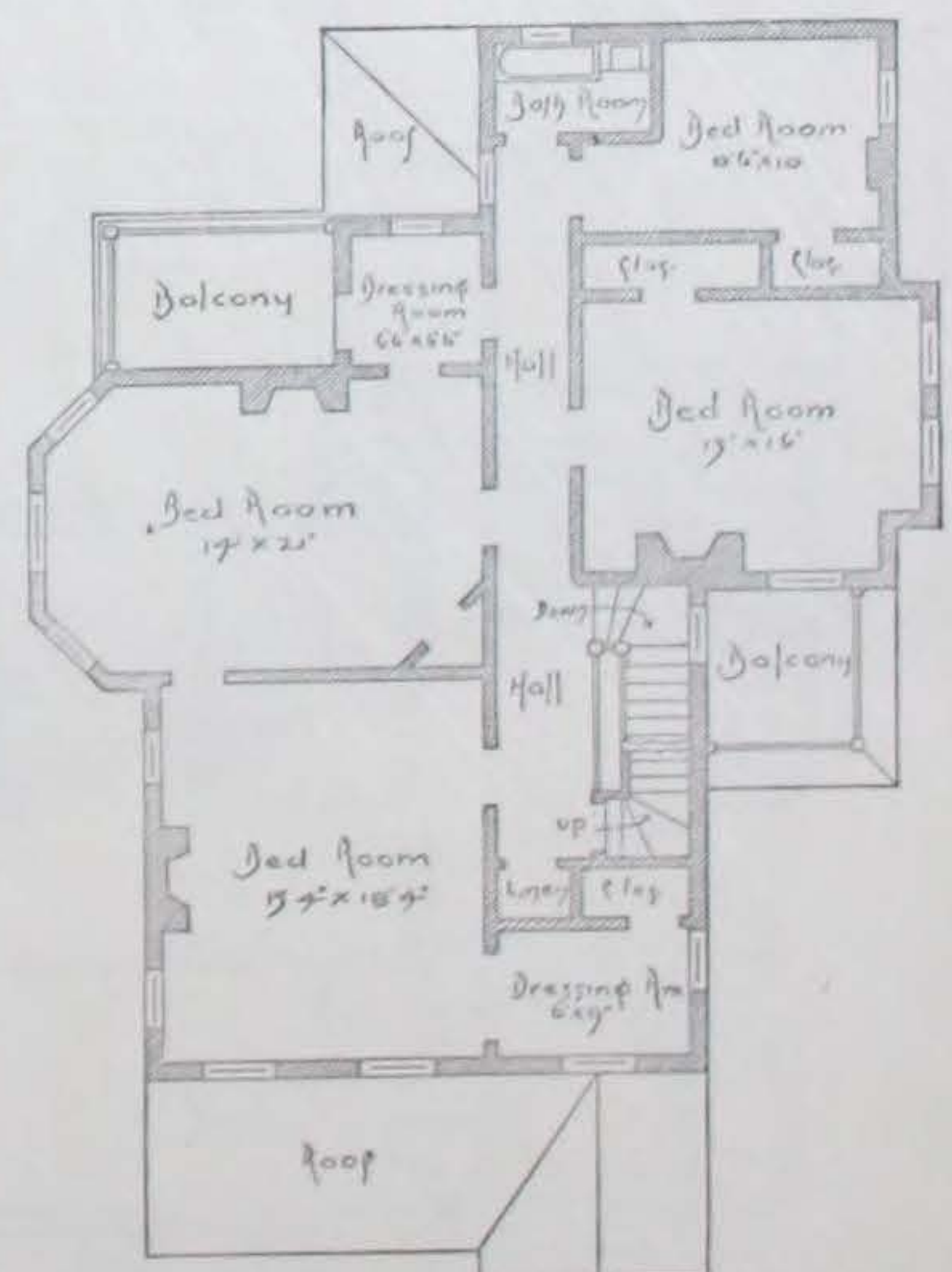
The kitchen is in the basement; a dumb-waiter serves between the kitchen and the butler's pantry.

Four bed-rooms besides large dressing-rooms and closets, and a bath-room, in second story.

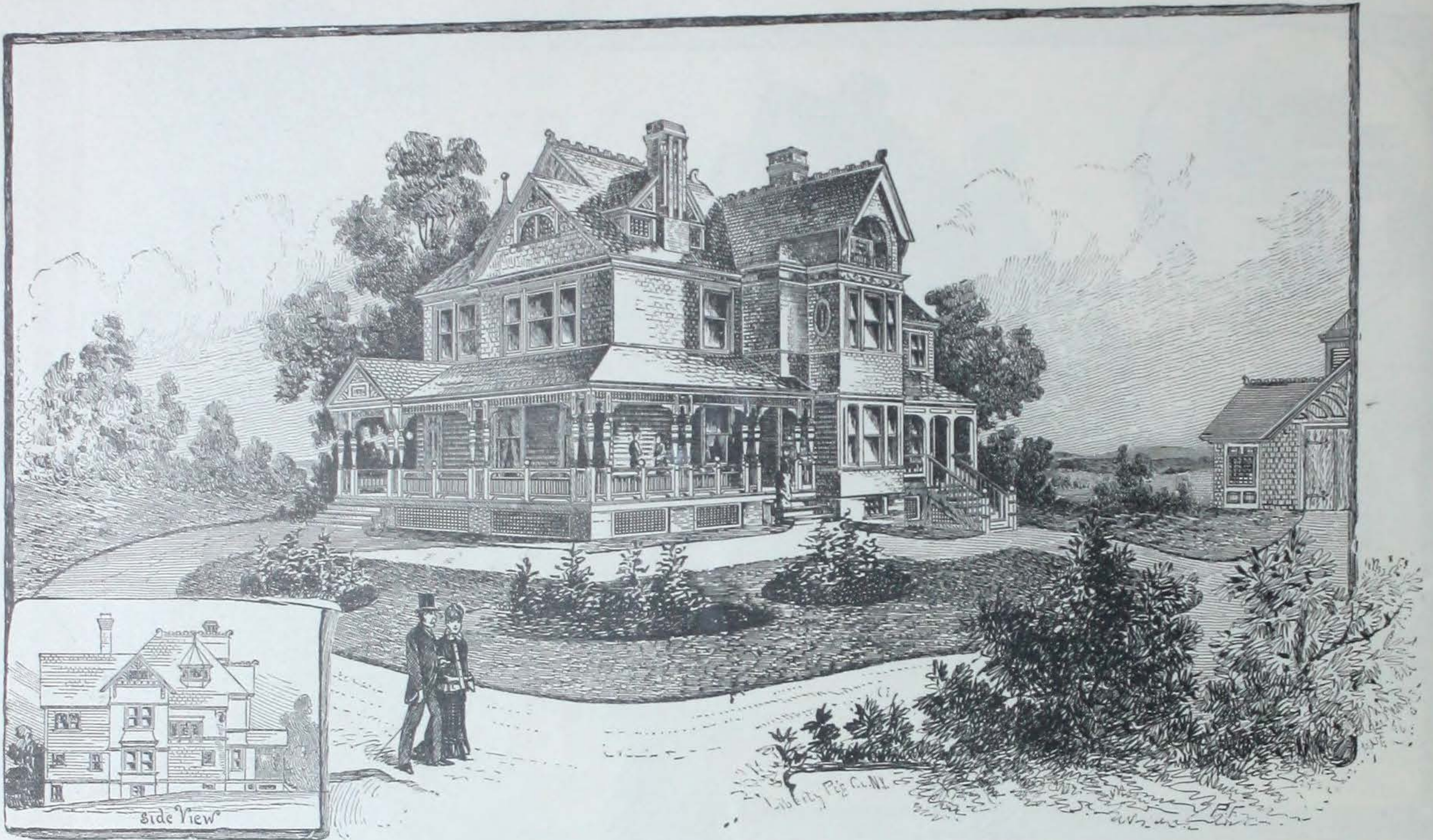
Rooms can be finished in the attic, if desired.

Cellar under the whole house and furnace for heating.

This house can be built for much less than our estimate in many parts of the country.



SECOND FLOOR. NO. 360



DESIGN No. 361. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 361

SIZE OF STRUCTURE: Front, 26 ft.; extreme width, 41 ft., 6 in.
Side, 61 ft., 6 in., including front veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft., 6 in.; First Story, 10 ft.;

Second Story, 9 ft., 6 in.; Third Story, 8 ft.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Roof, shingles.

COST: \$6,500, complete, except stained glass, mantels, range, and furnace.

SPECIAL FEATURES. — The veranda is 9 ft. wide on the front, and 7 ft. on the side.

Sliding doors connect all the principal rooms and hall with each other.

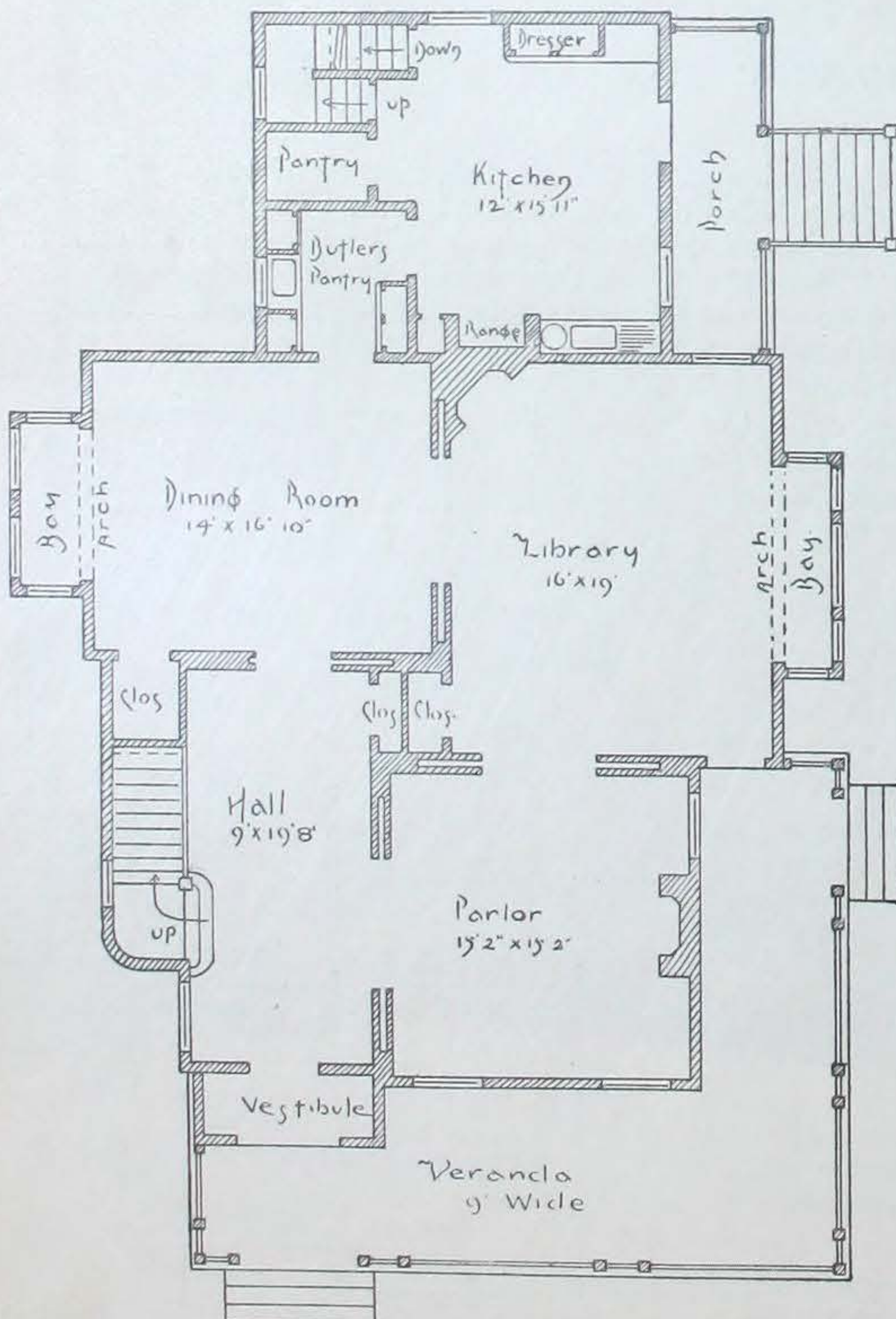
The library bay-window is 10 ft. wide, the opening being arched.

Wide staircase of hard wood.

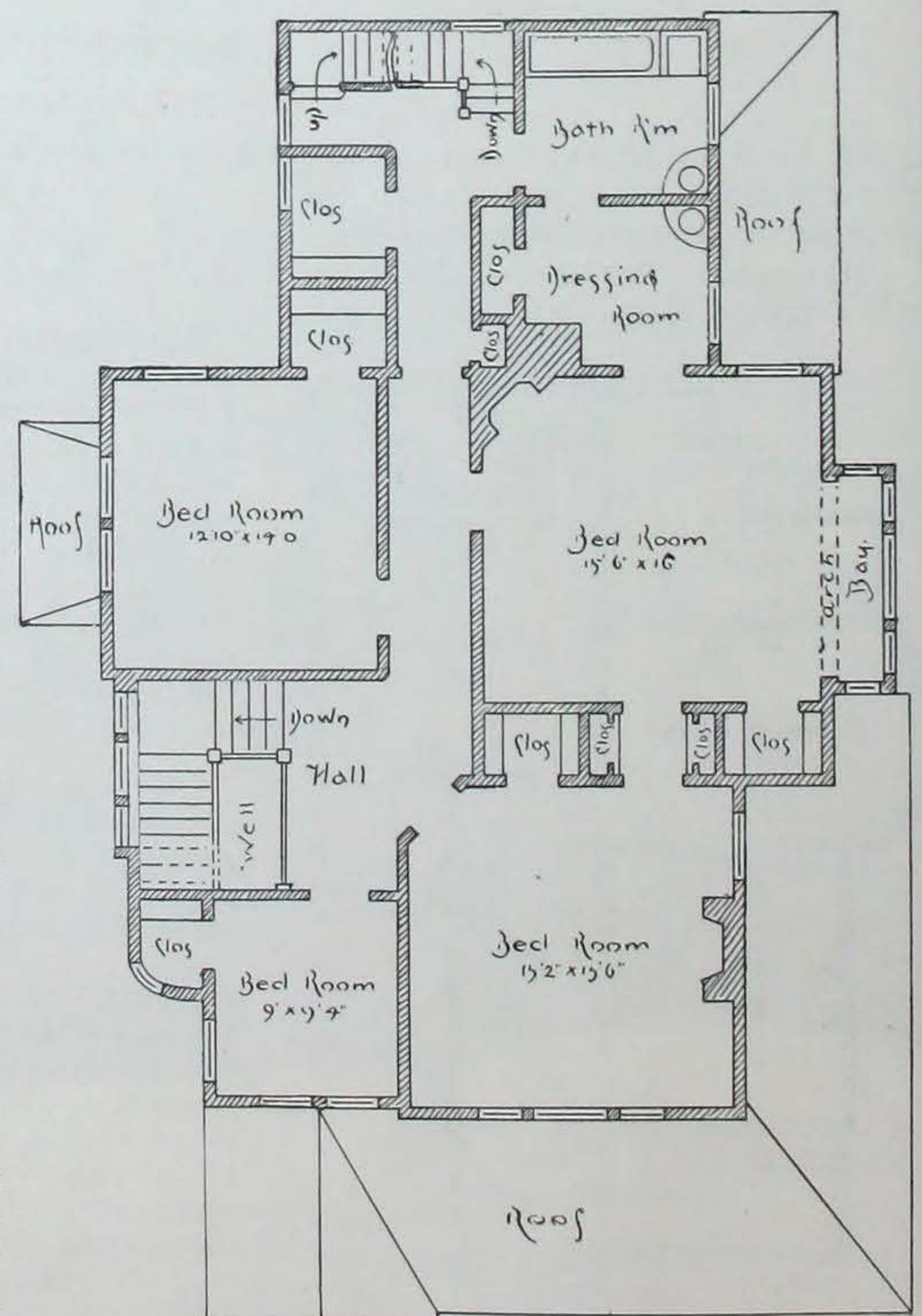
The staircase windows are glazed with stained glass.

The second story gives four bed-rooms; the dressing room is large enough to use as a bed-room if necessary.

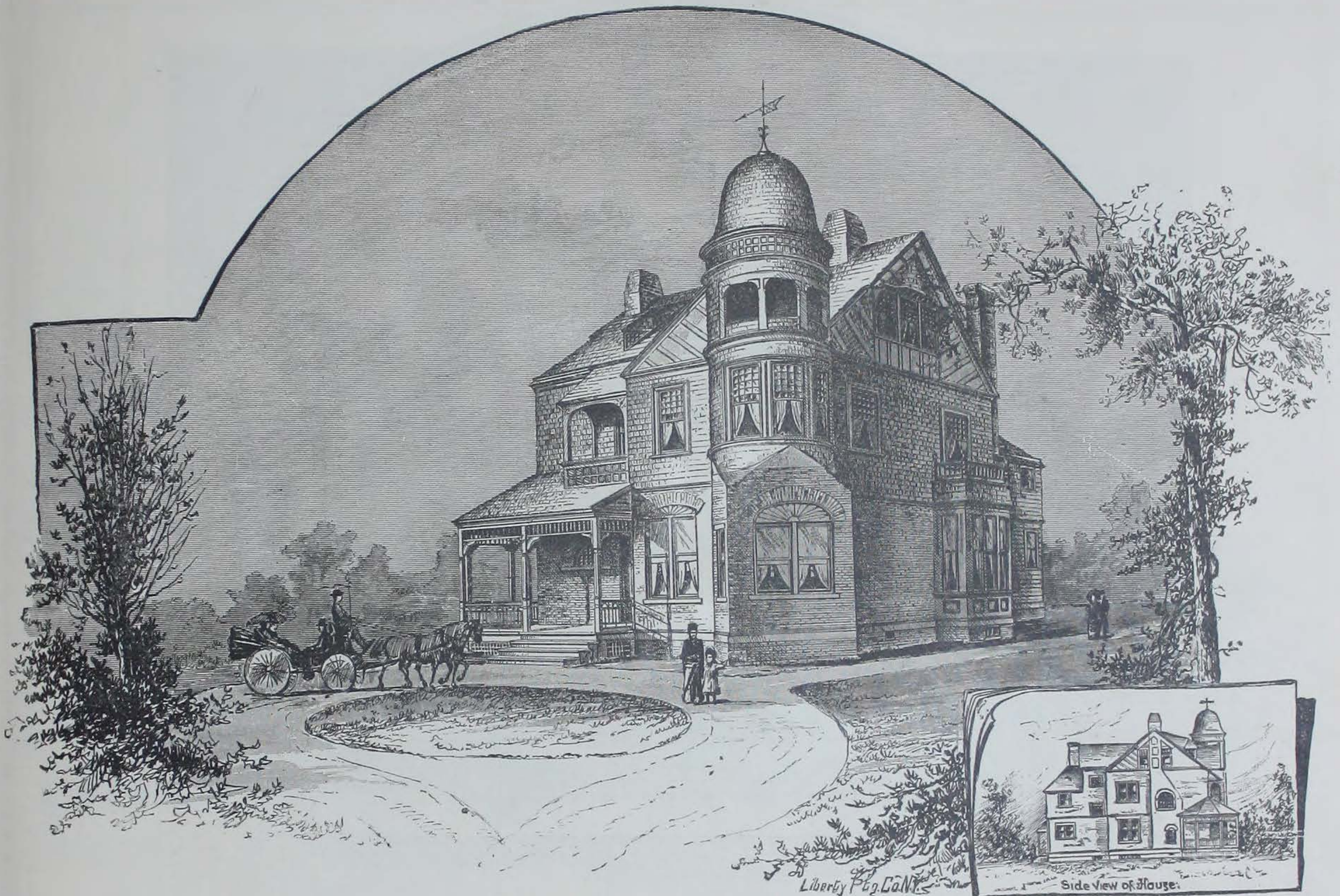
Cellar under the whole house.



FIRST FLOOR, NO. 361



SECOND FLOOR, NO. 361



DESIGN No. 362. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 362

SIZE OF STRUCTURE: Front, 28 ft. Side, 51 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft.

MATERIALS: Foundation, brick; First Story, brick; Second Story, shingles; Gables, panelled; Roof, shingles.

COST: \$5,000, complete, except mantels, heater and kitchen range.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables,

Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—

A unique design for a brick and frame house.

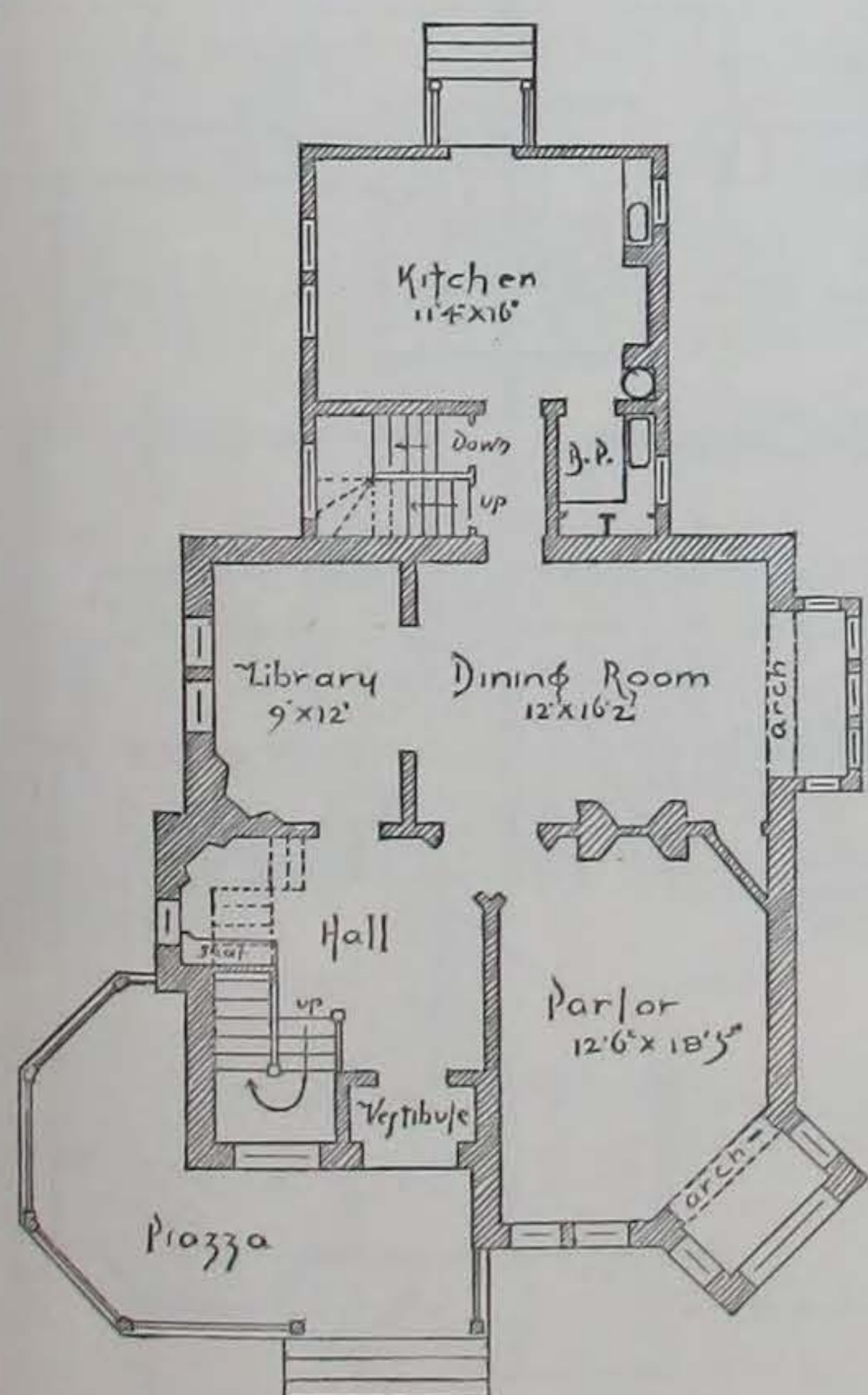
The hall, entered from a vestibule, is spacious and inviting. The nook underneath the upper part of the stairway has a seat facing the fire-place and a window.

The stairway starts near the centre of the hall toward the front, and has a broad platform at a height of four steps, at which point the direction of ascent is reversed toward the rear.

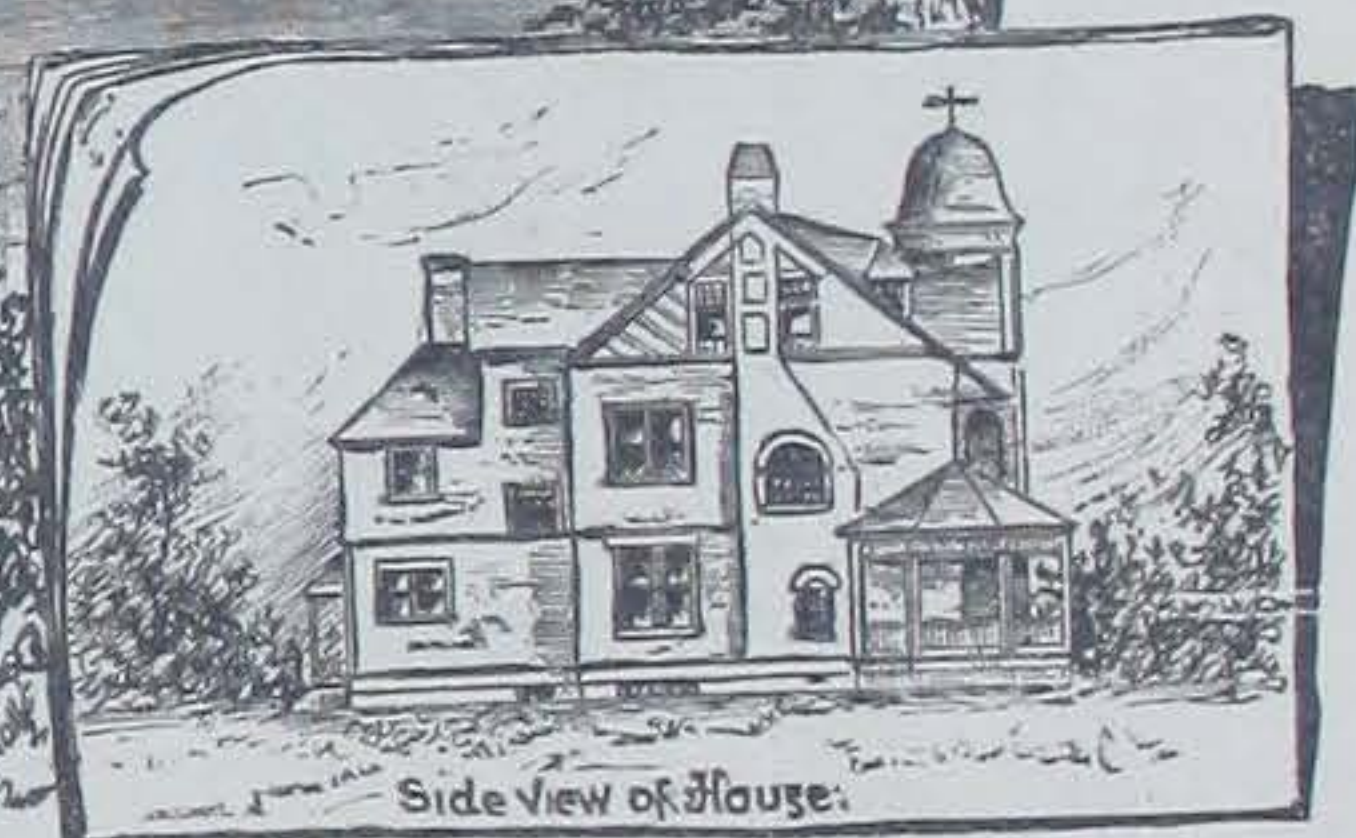
Six bed-rooms on the second floor, and four in the attic if required.

The kitchen extension is built all frame down to the foundation walls.

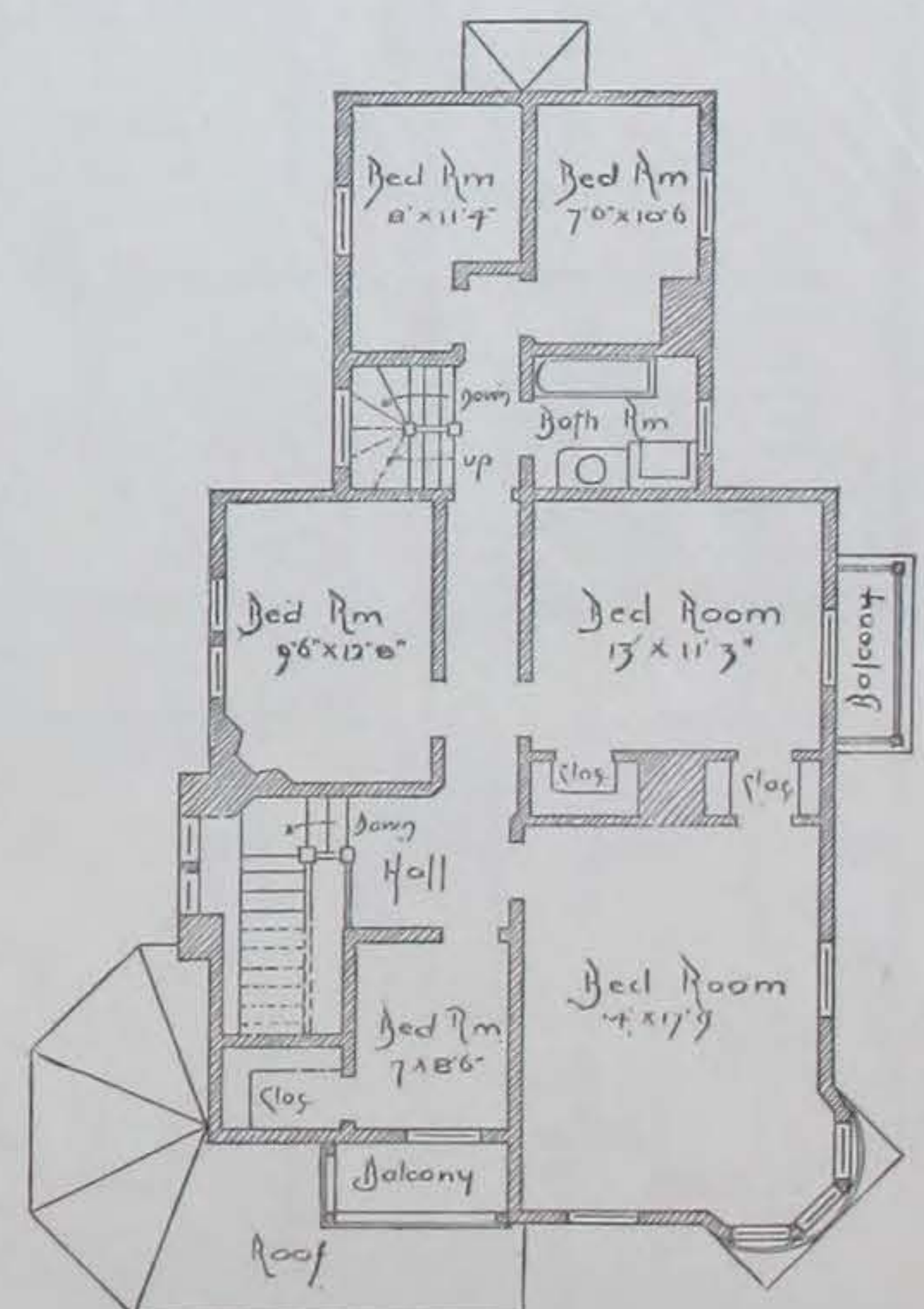
Cellar under the whole house.



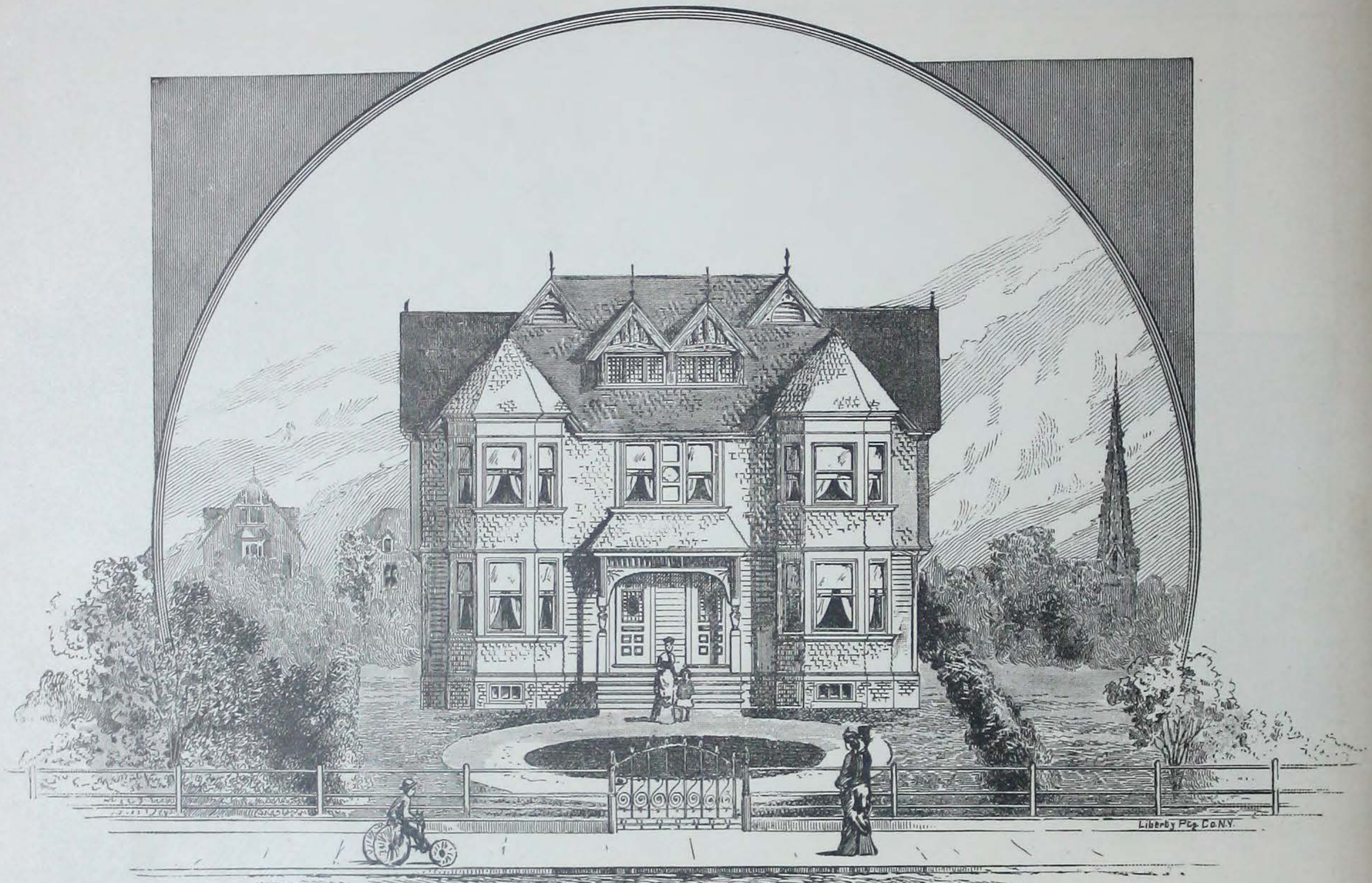
FIRST FLOOR. NO. 362



Side View of House.



SECOND FLOOR. NO. 362



DESIGN No. 363. FRONT ELEVATION

DESCRIPTION OF DESIGN NUMBER 363

SIZE OF STRUCTURE: Front, 42 ft. Side, 65 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Roof, shingles.

COST: \$8,000, complete, except mantels and kitchen ranges.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—A double frame "flat," designed for erection on a 50 ft. lot, allowing 4 ft. passage way on each side.

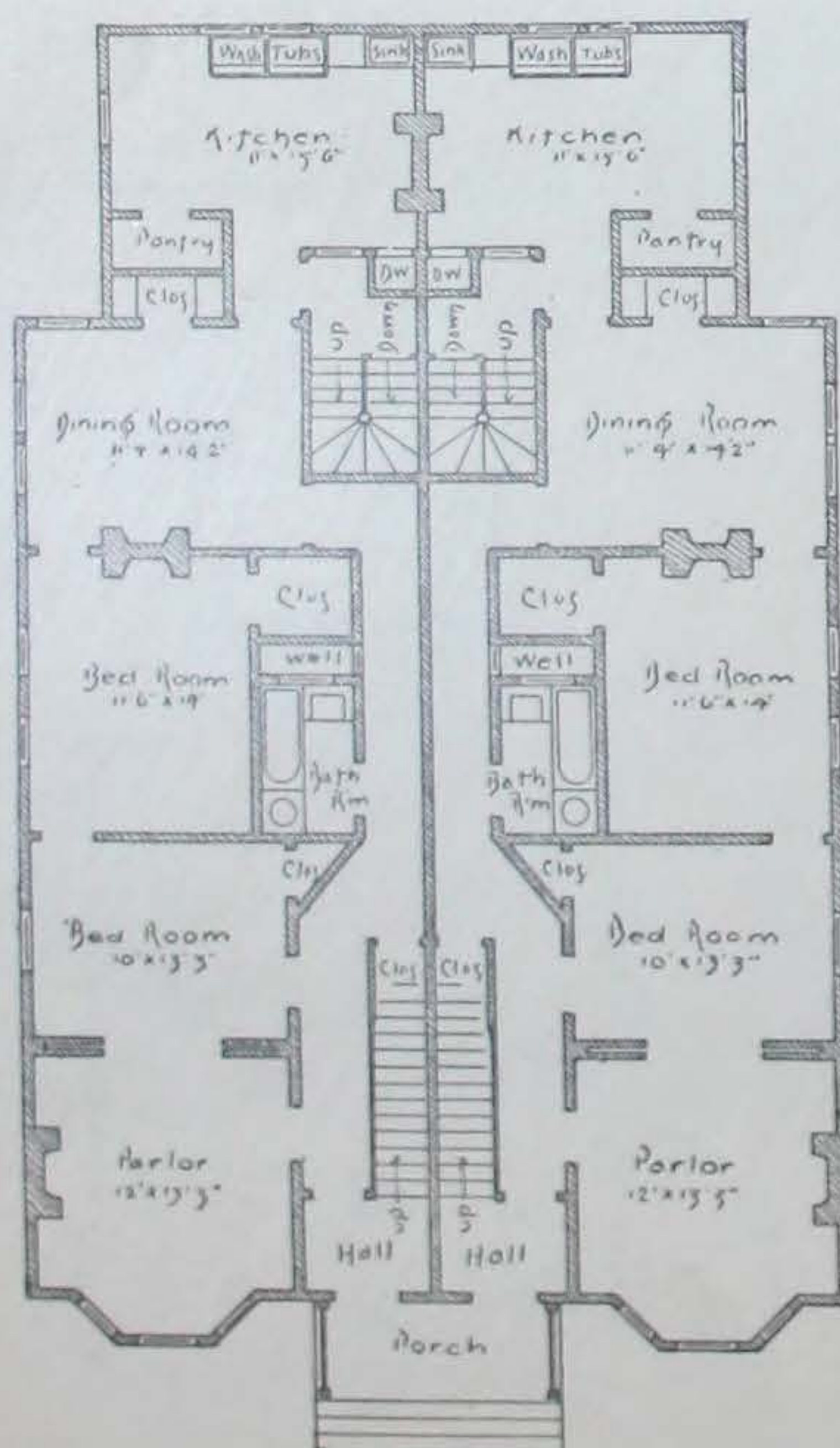
Each flat contains parlor, two good bedrooms, dining-room and kitchen, bath-room and large closets. The second story flats each have an additional hall bedroom at the front.

Dumb waiters to take provisions, etc., up from the cellar, where the tradesmen's entrance is placed.

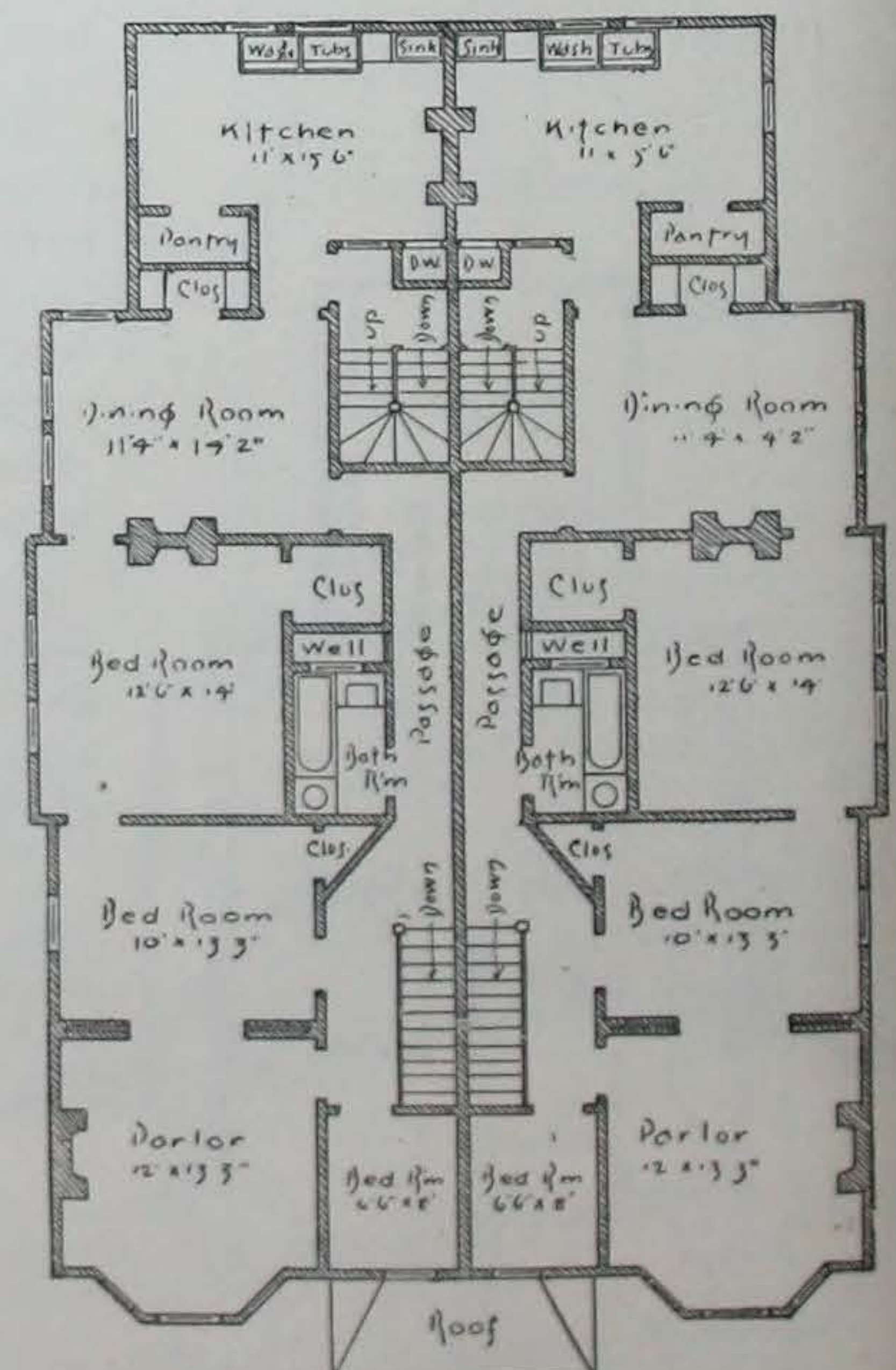
Servants' rooms in the attic.

Cellar under the whole house.

Back stairway from the cellar to the attic, entirely private.



FIRST FLOOR. NO. 363



SECOND FLOOR. NO. 363



DESIGN No. 364. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 364

SIZE OF STRUCTURE: Front, 44 ft., (each house, 22 ft.) Side, 53 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 10 ft.; Second Story, 9 ft., 9 in.; Third Story, 9 ft.

MATERIALS: Foundation, stone and brick; First Story, wood; Second Story, wood; Roof, slate; deck tinned.

COST: \$12,000, complete, except ranges, mantels and plumbing.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—A double frame three-story and attic "flat," intended for a corner lot. By cutting off the side projection, it can be built on a 50 ft. inside lot, and have a 3 ft. passage each side.

There is an attic where each of the three families occupying each building can have a store-room under lock and key.

Each family has three good bed-rooms (except those on the first floors), besides a servant's room, and parlor, dining-room and bath-room. Ample closets.

Large hall and easy staircase, with landings.

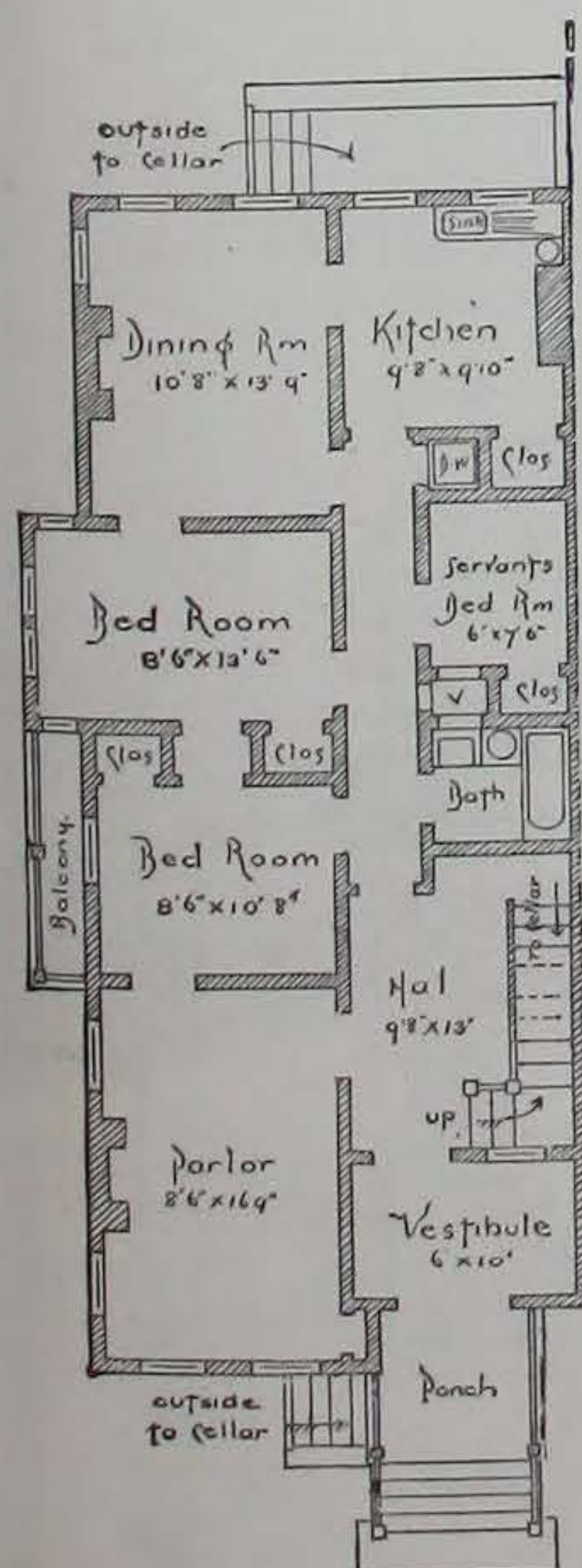
A dumb waiter for carrying coal, provisions, &c., to the upper flats.

The exterior is well broken up with balconies and bays; it does not have the "boxy" appearance which buildings of this class generally have.

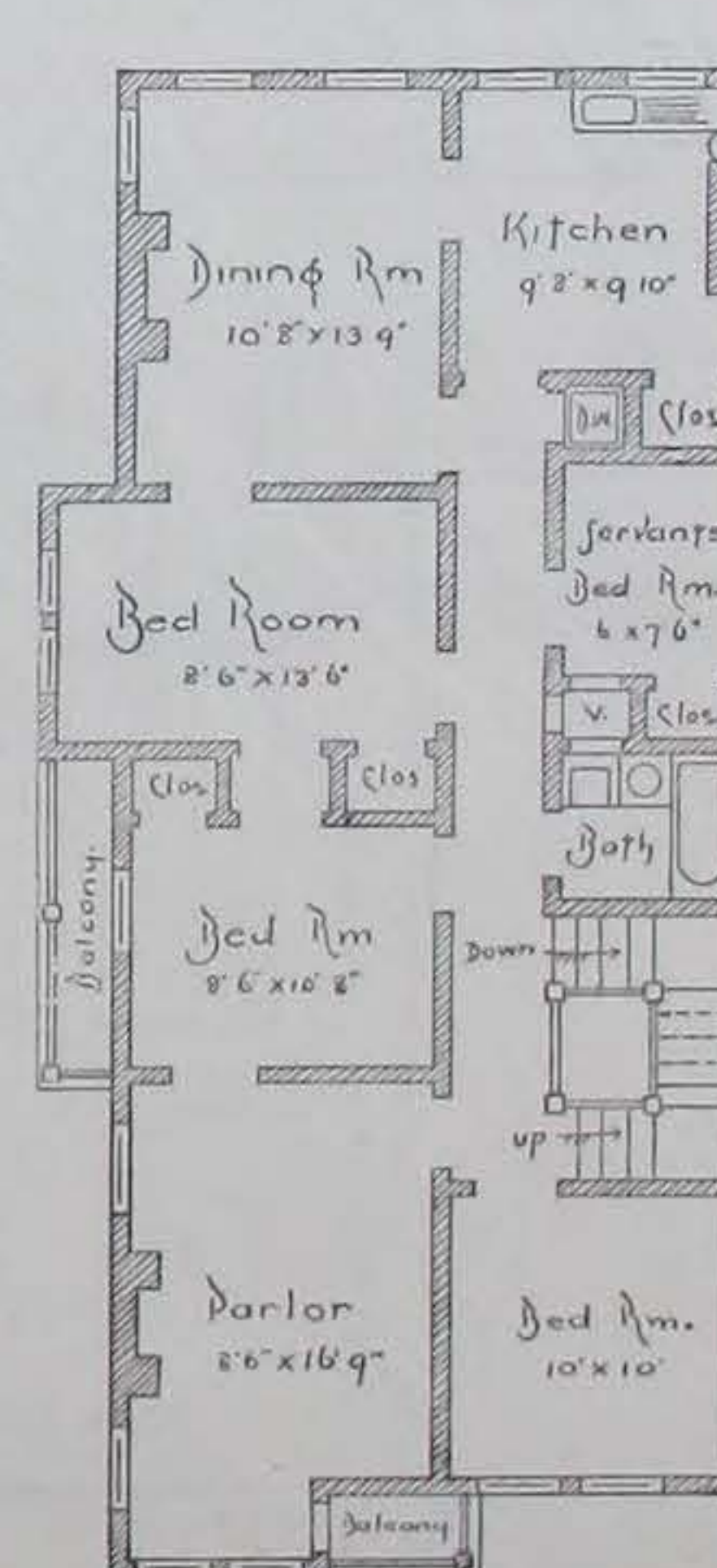
Cellar under the whole, with cement bottom.

The specifications call for a good, substantial and warm building.

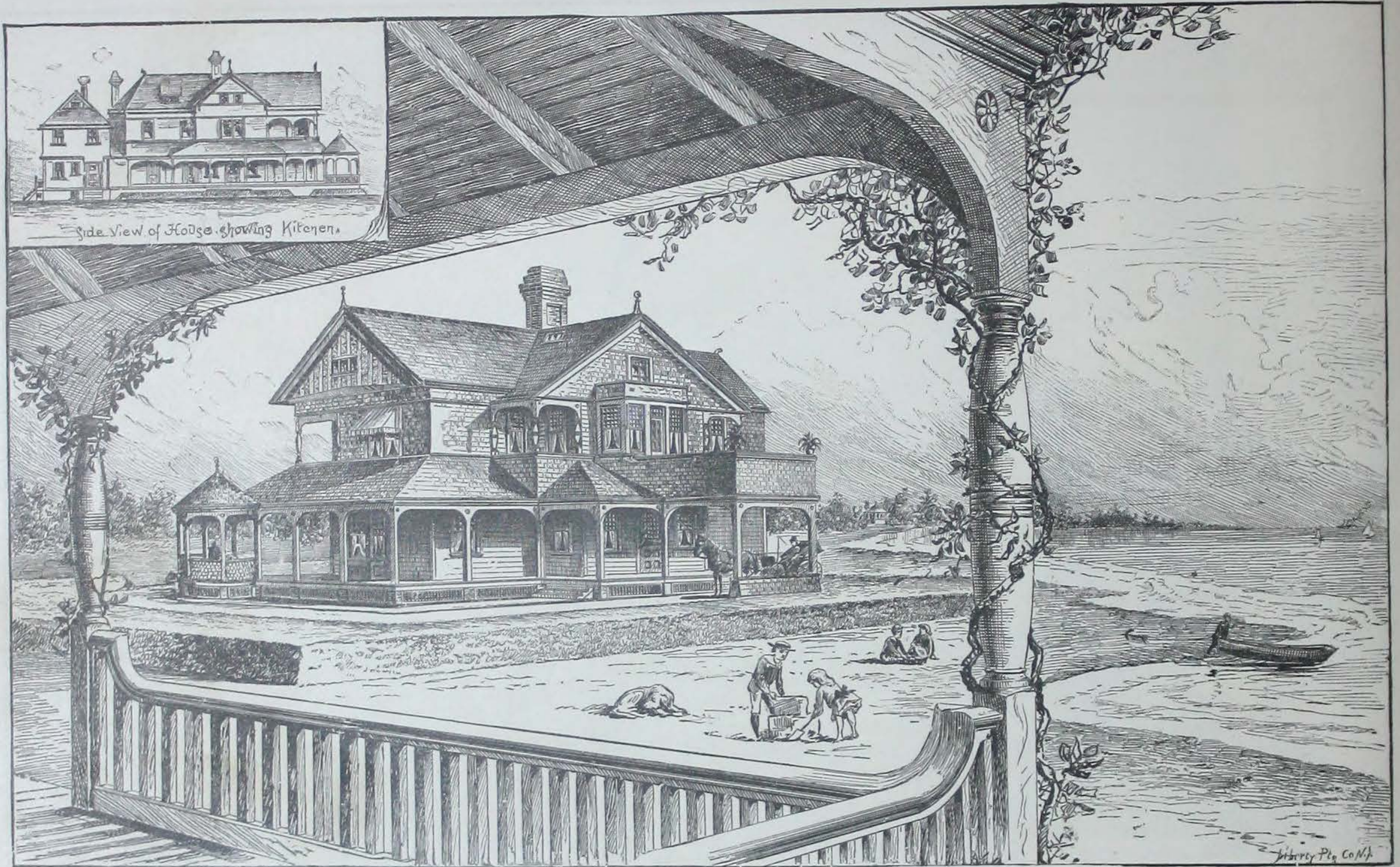
The third floor has the same accommodations as the second.



FIRST FLOOR, NO. 364



SECOND FLOOR, NO. 364



DESIGN No. 365. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 365

SIZE OF STRUCTURE: Front, 43 ft., 6 in., including verandas.
Side, 92 ft., including kitchen building.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft., 6 in.; First Story, 10 ft.;
Second Story, 9 ft.; Third Story, 8 ft.

MATERIALS: Foundation, brick walls and piers; First Story,
clapboards; Second Story, shingles; Roof, shingles.

COST: \$9,000,
complete.

[See page 147
for information
about details,
specifications,
bill of quantities
and working
plans of this de-
sign.]

NOTE

The cost is fig-
ured from prices of
material and labor
in the neighbor-
hood of New York
City, June, 1886.
In other localities
and at different
dates the cost will
be somewhat mod-
ified. The publish-
ers will be glad to
acquaint the in-
tending builder
with this modified
cost at any time.

**SPECIAL FEAT-
URES.**— De-
signed for a
seaside house.

The veranda around three sides of the house affords a prome-
nade 200 ft. in length. The rooms are very large.

The kitchen and servants' quarters are in the nearly detached
building in the rear, which is connected with the dining-room by a
butler's pantry.

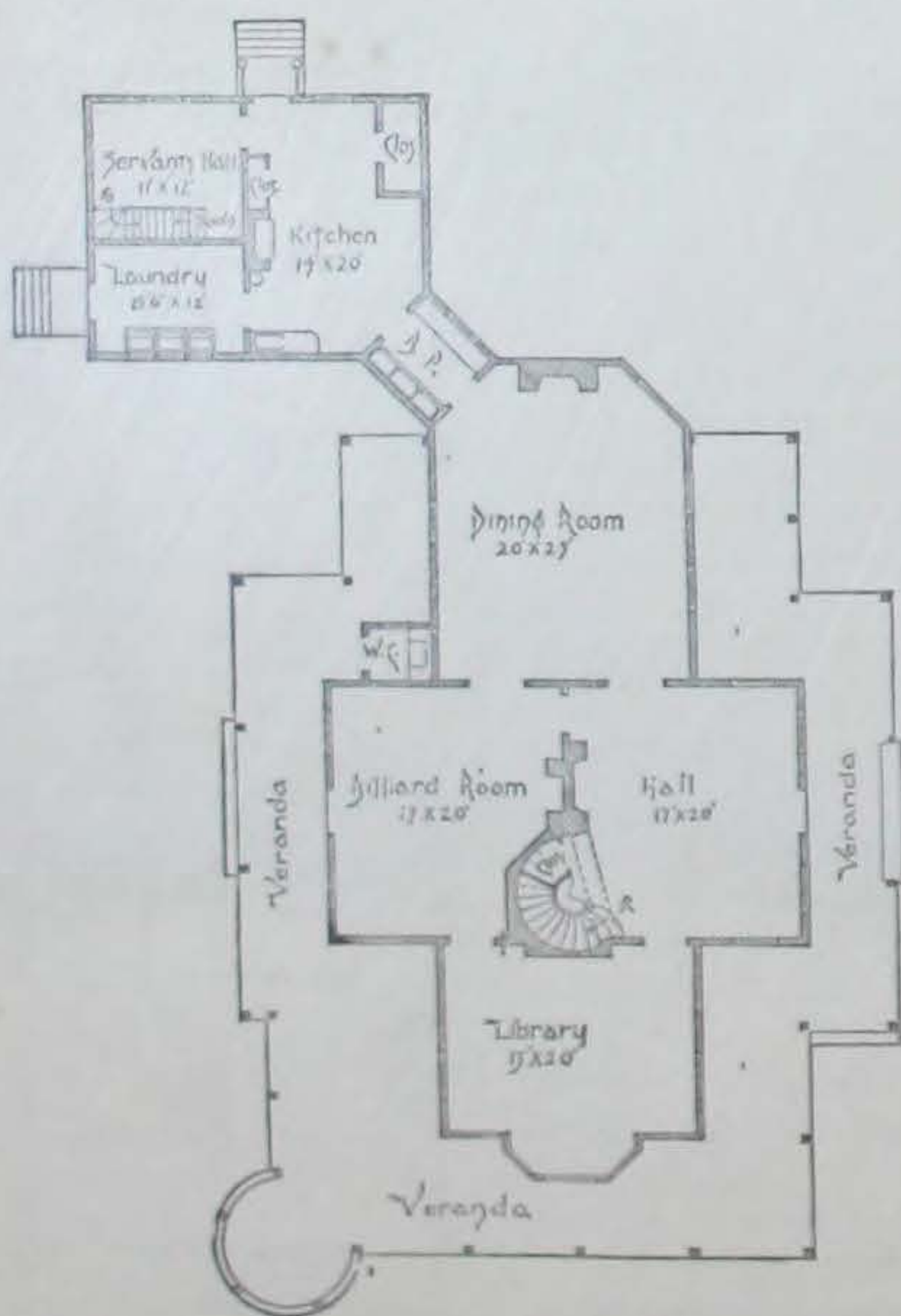
The entrance hall, 17 x 20 ft., has a large brick fire-place,
with a 4 ft. opening, which will take in logs of large size. The
dining-room
and the billiard-
room also have
large open fire-
places.

In the second
story the hall is
lighted by a
dome sash,
glazed with
stained glass,
placed over the
staircase.

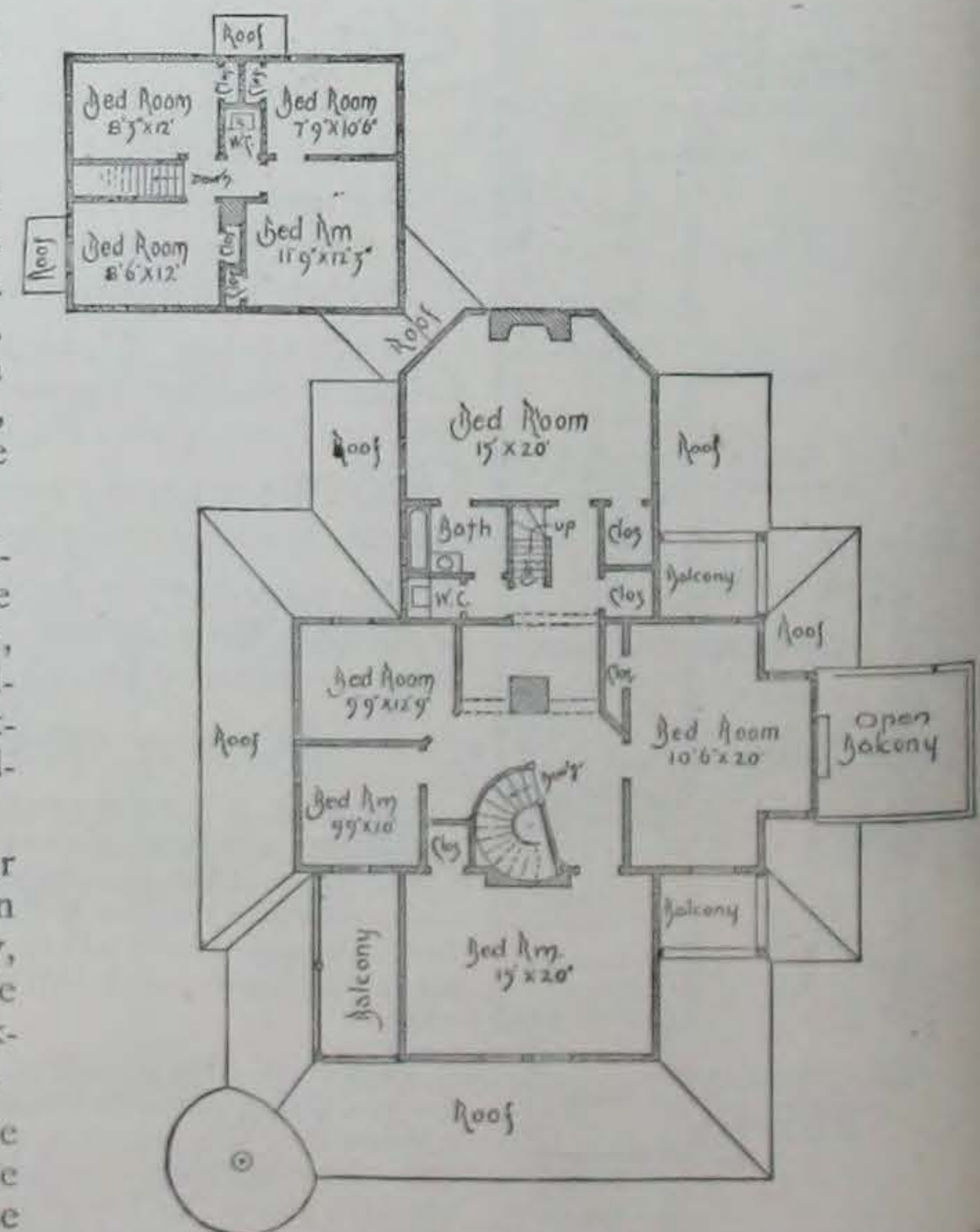
An open bal-
cony over the
carriage porch,
and covered bal-
conies connect-
ing with the bed-
rooms.

Cellar under
the kitchen
building only,
the main house
not being ex-
cavated under.

Four or five
rooms can be
finished in the
attic if desired.



FIRST FLOOR, NO. 365



SECOND FLOOR, NO. 365



DESIGN No. 366. PERSPECTIVE VIEW
DESCRIPTION OF DESIGN NUMBER 366

SIZE OF STRUCTURE: Front, 72 ft., including verandas. Side, 78 ft., including front veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 8 ft.; First Story, 12 ft.; Second Story, 10 ft.; Third Story, 8 ft., 6 in.

MATERIALS: Foundation, stone; First Story, rock face stone-work; Second Story, shingles; Roof, red Akron (Ohio) tile.

COST: \$15,000 to \$18,000, complete, except mantels and heating apparatus.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

The entrance to the hall is by a low, wide "Dutch" door, which, with the windows at the side of the door are grouped under a wide elliptical stone arch.

The hall is finished in Georgia pine; the staircase is oak. The hall ceiling is wood panelling.

Sliding doors connect the rooms.

The hall fire-place is very large—intended for burning wood.

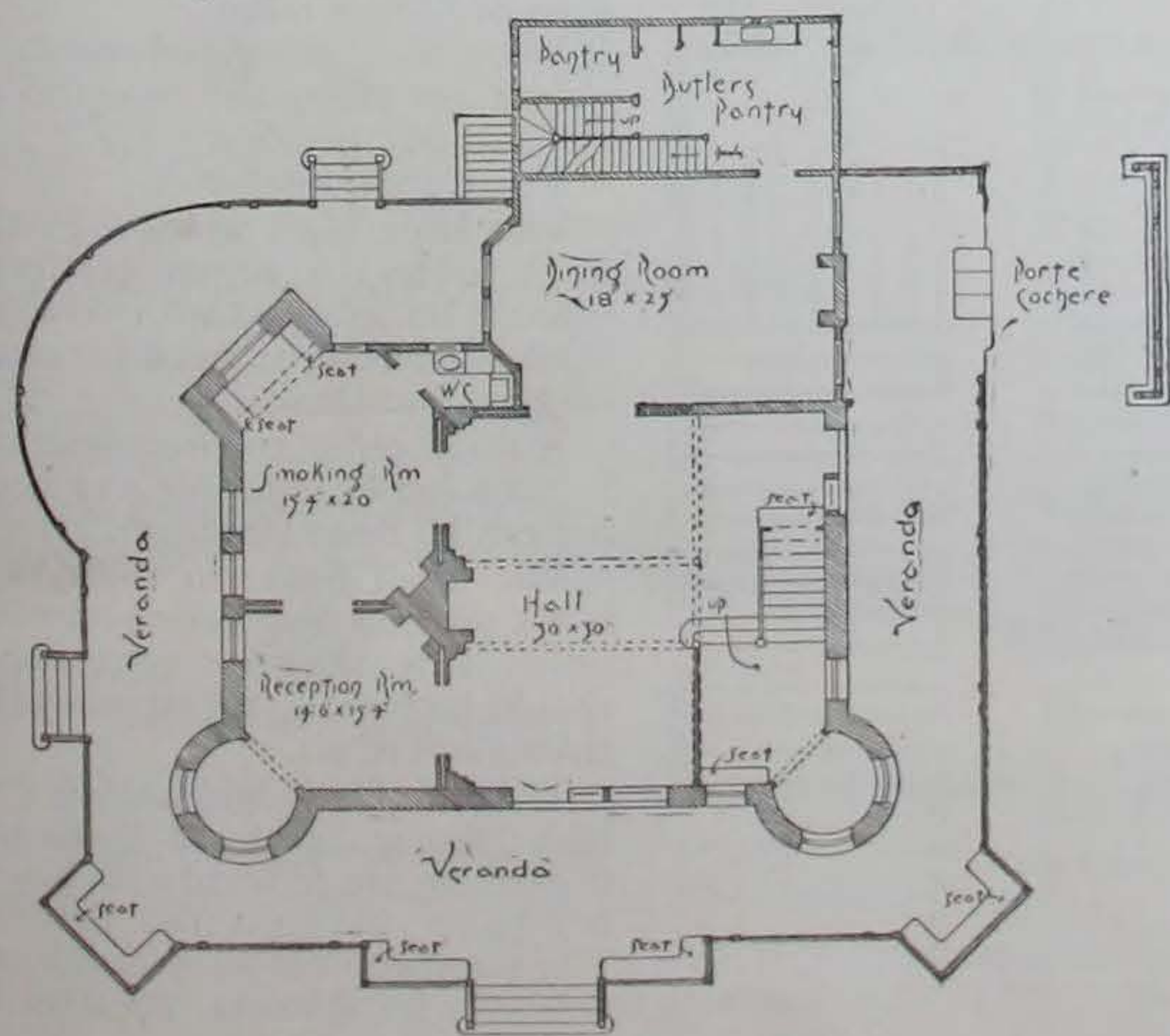
The veranda has an average width of 12 ft.

The group of three long windows over the staircase, which show in the view, are filled with stained glass of rich design.

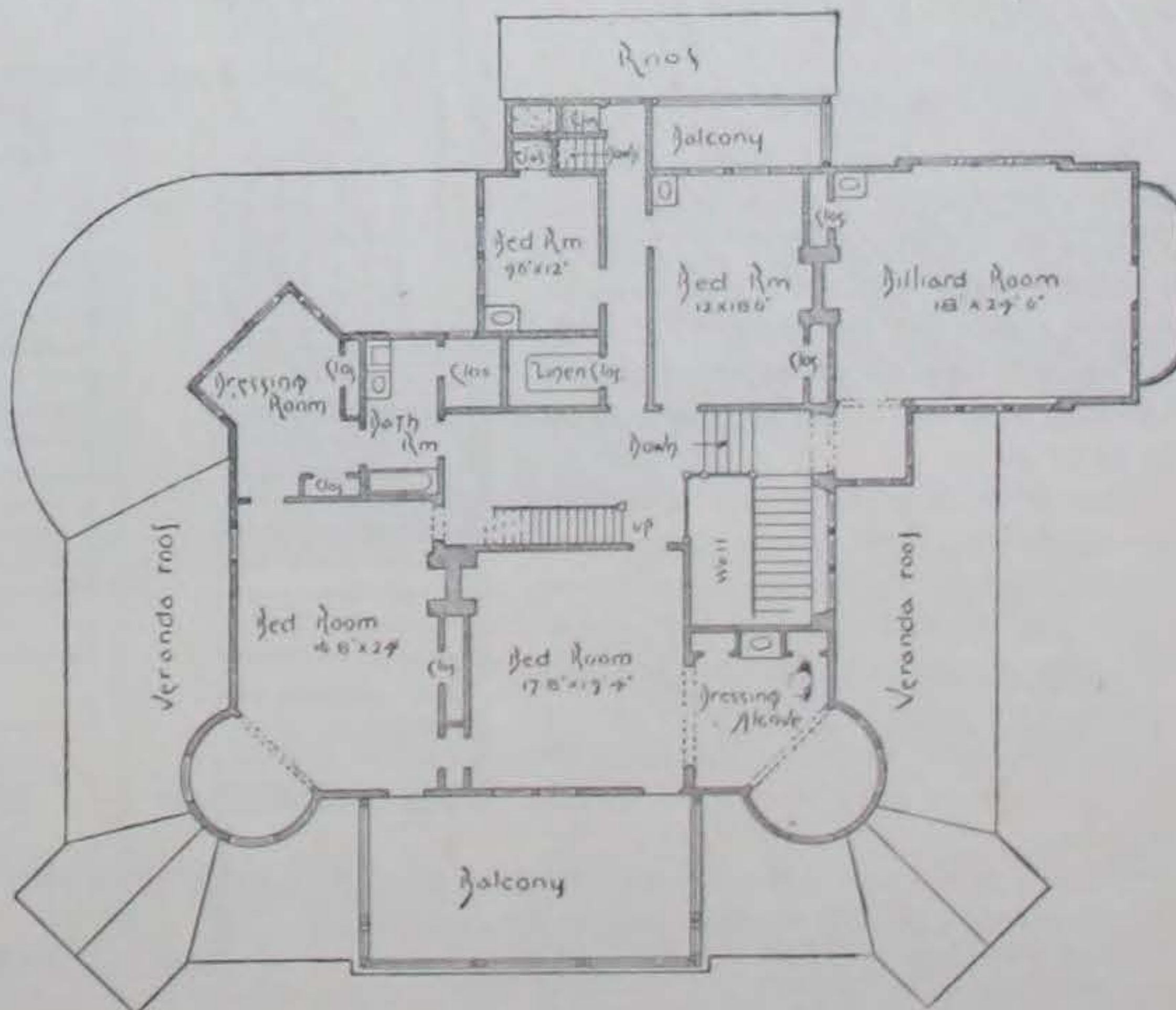
The billiard-room is over the carriage porch, and has a panelled ceiling.

There are two large bed-rooms in the attic, besides two rooms for servants.

Cellar under the whole house, where kitchen, laundry and servants' hall are located.



FIRST FLOOR. NO. 366



SECOND FLOOR. NO. 366



DESIGN No. 367. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 367

SIZE OF STRUCTURE: Front, 51 ft. Side, 45 ft., over all.

SIZE OF ROOMS: See floor plans.

MATERIALS: Foundation, brick; Walls, shingled; Gables, shingled; Roof, shingled.

COST: \$3,000, complete, except pewing and heating apparatus.

SPECIAL FEATURES.—Designed for a small Baptist church. A baptistry is provided under the preacher's platform. That part of the platform covering the baptistry is arranged to slide back under the floor of the passage.

Omitting the baptistry, this design is appropriate for any evangelical denomination.

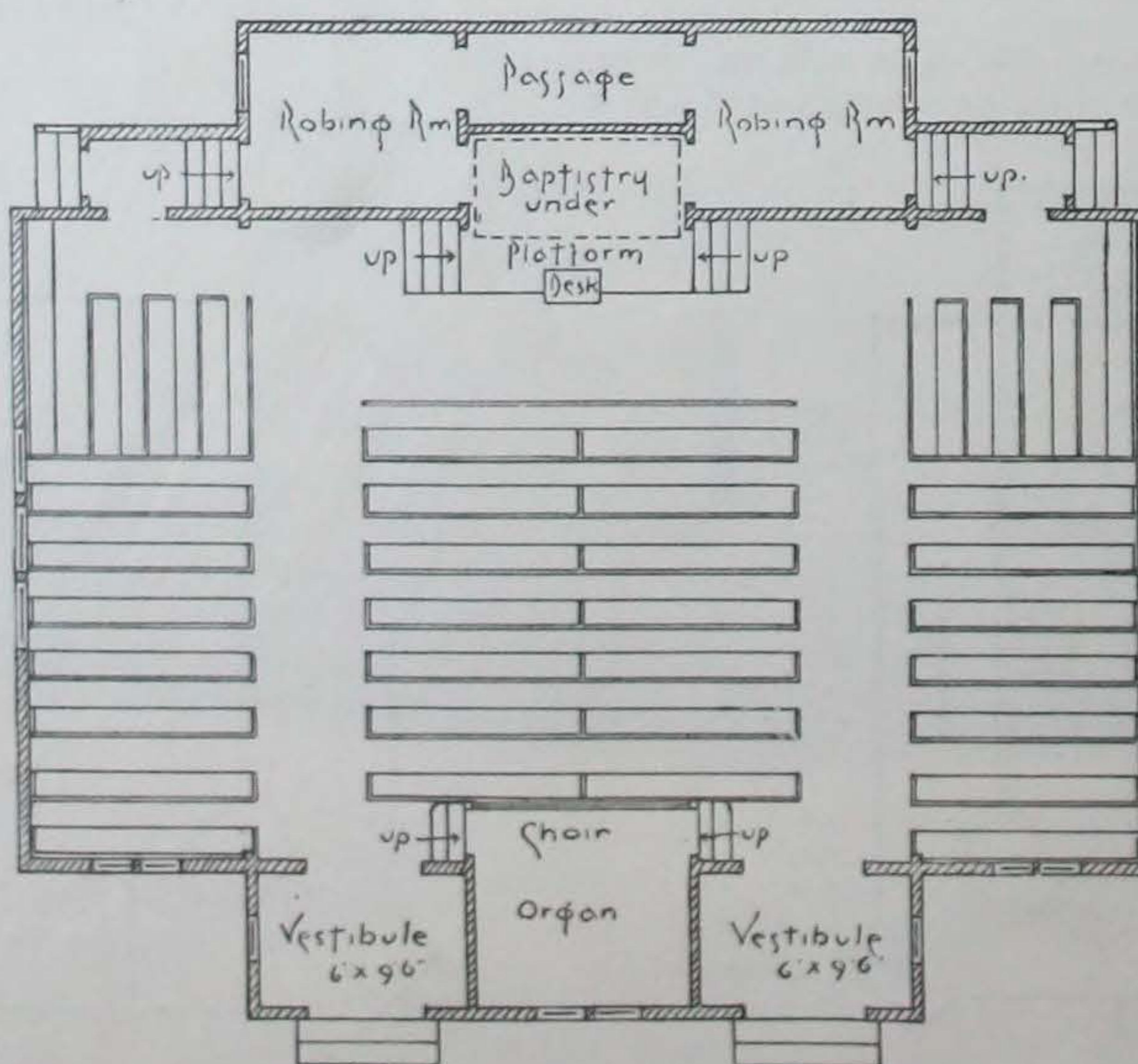
[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.



FLOOR PLAN, NO. 367

The inside dimensions of the auditorium are 50 ft. by 29 ft.

The robing-rooms are 8 ft. by 9 ft.; they can be used as study, class or library rooms.

With the pews arranged as shown on plan, the auditorium will seat 225 persons.

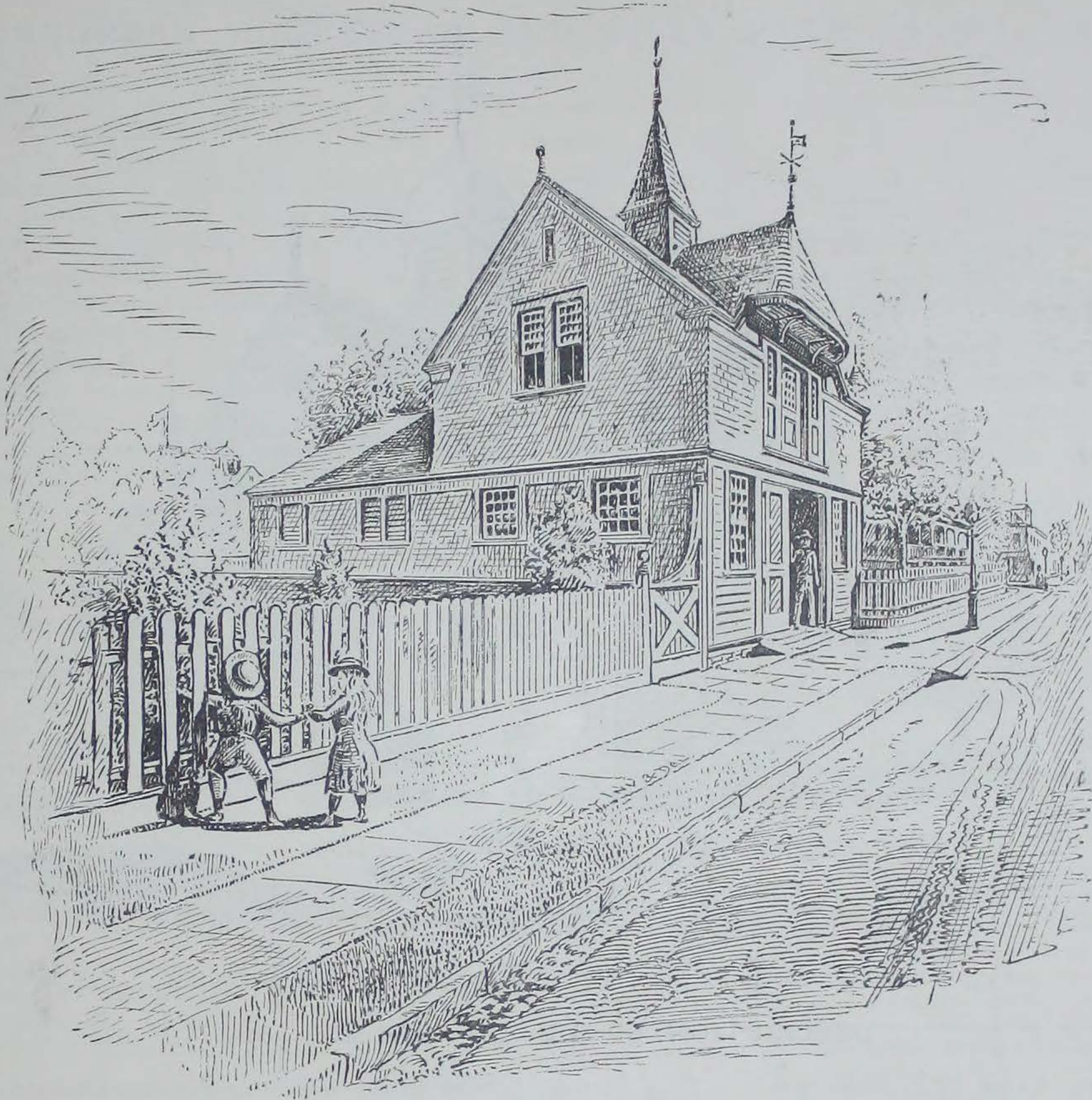
There are no galleries.

The large high window in the front, over the organ platform, should be glazed with stained glass. There is no need for stained glass elsewhere.

A small cellar to accommodate furnace can be built, or the heating can be done by stoves.

The small tower in the centre is to provide ventilation; underneath this the gas chandelier should be placed, to increase the circulation of air.

The interior is wainscoted 4 ft. high; the walls above that, and the ceiling are finished with heavy red paper between the timbers. The wood-work is all dressed and finished its natural color with varnish.



CARRIAGE-HOUSE AND STABLE DESIGN No. 368. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 368

SIZE OF STRUCTURE: Front, 20 ft. Side, 40 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 10 ft.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Roof, shingles.

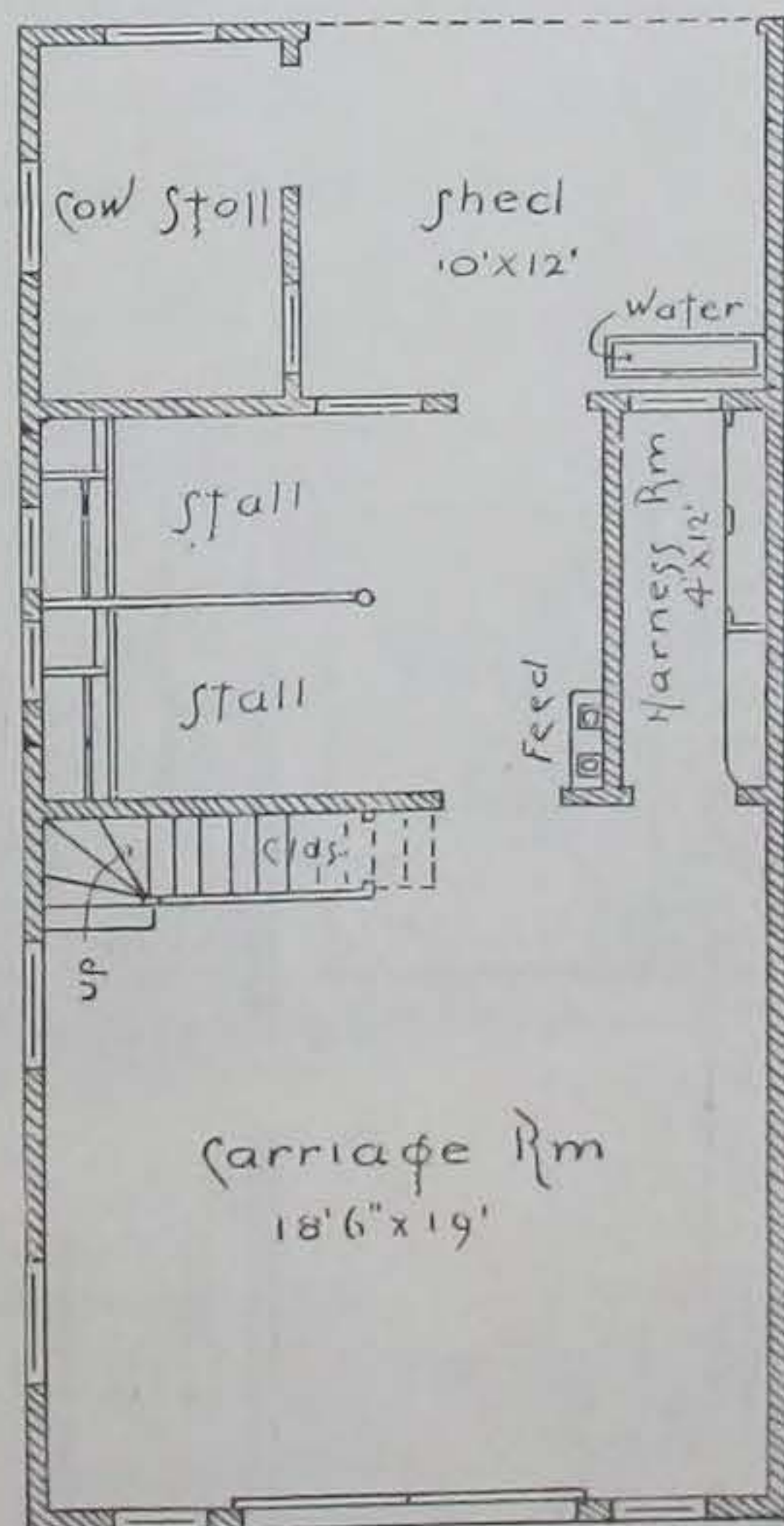
COST: \$1,000, complete.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

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Details of the Cornices, Windows, Doors, Gables, Trim, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.



GROUND FLOOR. NO. 368

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Suitable for a twenty-five foot village or city lot.

Accommodations for two horses and a cow. A covered shed in the rear, 10 x 12 ft.

The carriage-room accommodates two or three carriages.

Harness-room, 4 x 12 ft., connected with the carriage-room. A closet under the stair to loft.

A good hay-mow over the carriage-room. The man's bed-room may be partitioned off in mow, if desired.

With small additional expense the mow may be extended, full height, over the stable, cow-stall and shed.

The space occupied by the cow-stall is wide enough to make two horse-stalls, if such an arrangement is preferred.



CARRIAGE-HOUSE AND STABLE DESIGN No. 369. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 369

SIZE OF STRUCTURE: Front, 36 ft. Side, 29 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 10 ft.

MATERIALS: Foundation, stone; First Story, stable part, brick; carriage-house, wood; Second Story, frame, shingled; Roof, shingles.

COST: \$1,500, complete.

[See page 147 for information about details, specifications, bill of quantities and working plans of this design.]

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—A Coachman's room is provided over the carriage-room with a heat flue in the chimney, conveying heat from the harness-room stove.

The harness and carriages are well separated from the stable proper, avoiding the injurious effects of stable gases upon the coach varnish and harness.

Vehicles can enter or leave the barn from either the front or rear entrance; if a storm is assailing the front, the carriages can enter or be driven out at the rear.

In the centre of the building, under the ventilator, a hatchway is provided in the second story floor, providing a means of taking up hay or grain.

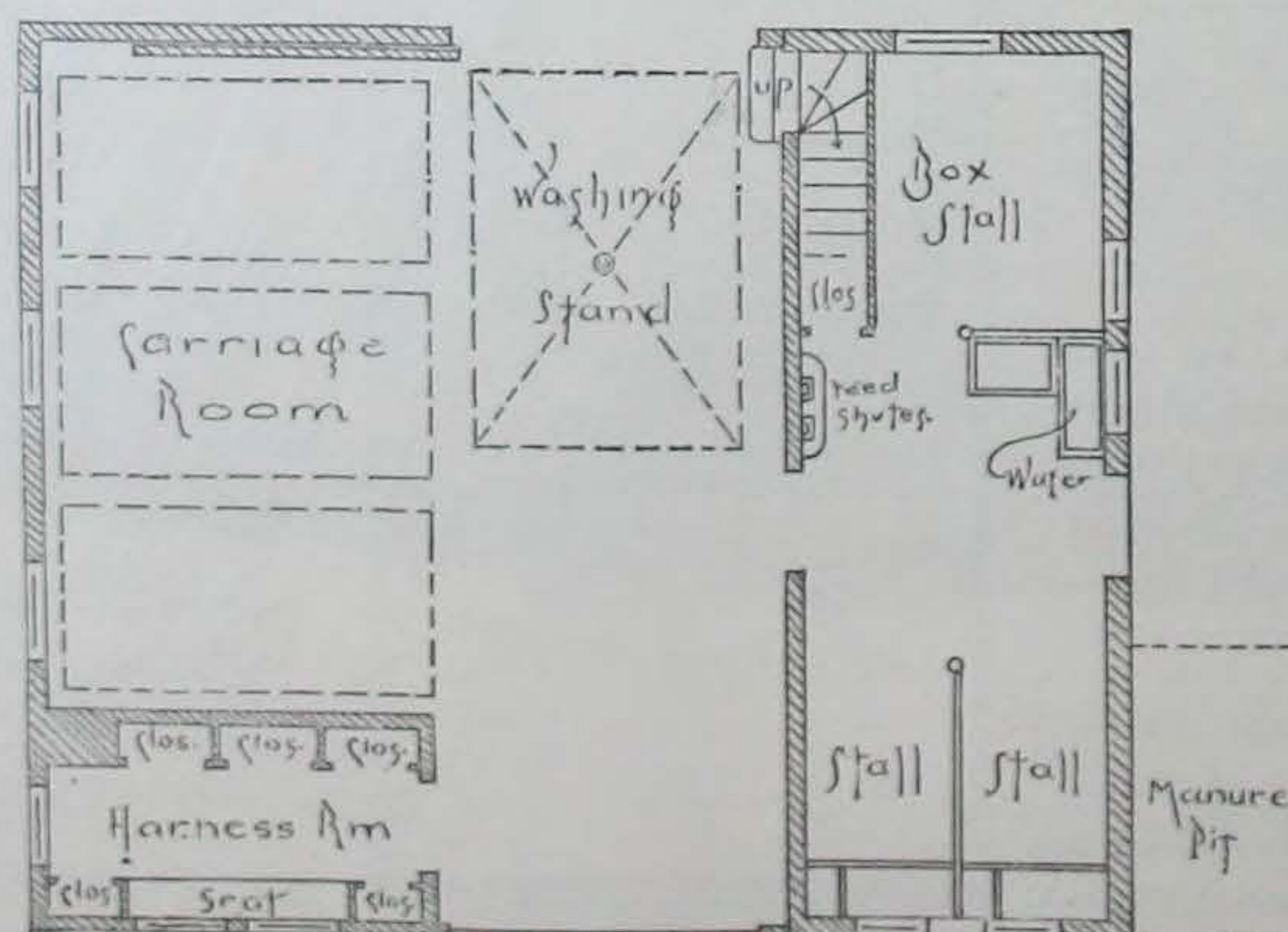
The washing-stand is made with cement, and connected with the drain.

The manure pit has a ventilator as shown on the right of the perspective.

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, June, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.



GROUND FLOOR. NO. 39

SUBURBAN HOMESTEAD AND VILLA PARK ASSOCIATIONS

BY HON. CHARLES CRARY

IT is not generally known that the Legislature of New York, in 1881, passed a most important general law for the incorporation of Suburban Homestead and Villa Park Associations. That law may be found in the Session Laws for that year (Chapter 351, page 473). It is published in full at the conclusion of this article, and the attention of those interested in the subject is specially directed to it.

Prior to the passage of the act referred to, there were two general laws in this State for the incorporation of real estate associations. (See 3 Edmond's, N. Y. Statutes, pp. 778, 783). But there was no law for the proper organization of a suburban homestead, or a villa park association. An association organized under either of the general laws, could own real estate, and dispose of it; but having disposed of it, the association would cease to have any interest in, or control over it, or over the purchases of it. And so, under those laws, purchasers would own the property bought by them, but would have no interest in the corporation, or any control over it, or over any of its property. It was desirable to change this, and, if possible, combine the two interests. And this has been done by the statute under consideration; which makes the lot proprietors not only owners in fee of the lots purchased by them, but directly interested in the association, and in all its remaining property; and, therefore, interested to carry out successfully the objects for which the association was incorporated. The lot owners thus become interested to improve and build up the property, and to enhance its value. And, after all the lots into which it has been sub-divided have been sold, they will still keep the control of the association with respect to streets, avenues, public places and parks, and the improvement and embellishment of the same; and with respect to sewerage or drainage, and the water supply, and the enforcement of rules set out in the deeds to the lot proprietors.

The following is a synopsis of the several provisions of the Statute:

Sections 1, 2 and 3, are the usual provisions under similar acts, and direct the manner of organizing the corporation.

Section 4 authorizes the corporation to buy real estate, and to sub-divide the same into lots and plots, and sell the same.

Section 5 relates to the election of trustees, the qualifications for the office, and of the persons entitled to vote for trustees. The section allows lot-owners to vote according to the number of square feet of land owned by them; and shareholders are entitled to the number of votes agreed upon in their agreement with the association.

Sections 6 and 7 direct, in respect to the disposition of the funds of the association, no part of which can be paid to the lot-owners until provision is made for the payment of taxes and for the improvement and embellishment of the property, and the streets and avenues within it. The seventh section further provides for the purchase of lands by paying for them a proportionate share of the proceeds of the sales of lots and plots made from the same; and authorizes certificates to be issued, representing such proceeds, in the form of stock certificates, and transferable on the books of the association as stock is usually transferable.

Sections 8, etc. The remaining sections of the Statute are the same as are usual in similar acts, enabling corporations formed under them, to carry out the objects for which they are organized.

The Statute imposes no liability, personal or otherwise, upon lot-owners; nor are trustees of the association liable, in any manner, except that they must employ such diligence and such prudence in the management of the property, as, in general, prudent men of discretion and intelligence employ in their own like affairs.

The above is a synopsis of the several provisions of the new Statute. An examination of the previous laws on the subject will show that they were inadequate to accomplish the purpose desired, namely, the proper organization of suburban homestead and villa park associations. They were made for the capitalist, and as a means only to facilitate the purchase and sale of real property. The act under consideration, on the contrary, was made for those who will purchase the property and occupy it, and make it their homes, as well as for those who will put their money into it for purposes of investment.

The Statute, it will be seen, provides for two forms of organization; one, under section six, where the entire proceeds from the sales of the property will belong to the association or the lot proprietors, alone; and the other, under section seven, where a proportionate share of the proceeds will be allotted to the persons from whom the

property was purchased, as the price or consideration thereof, and whose interests will be represented by shares in the form of certificates, transferable on the books of the association as stock is usually transferable.

For the purpose of illustrating the two different forms of organization, a plan of organization is submitted for each, as follows:

I. PROPOSED PLAN FOR ORGANIZATION UNDER SECTION SIX:

A party of twelve persons purchase three hundred acres of land, which they propose to lay out into lots and plots on the Villa Park plan; the whole to contain about five hundred building sites, averaging from one-quarter to one acre each, and to be sold to those who will build upon them.

A corporation to be formed under the Statute; the certificate to provide for twelve trustees to manage the affairs of the association, and the persons owning the land to be the trustees for the first year; after which trustees to be elected annually by the lot proprietors, as provided by the Statute.

The owners to transfer to the corporation the three hundred acres, taking a mortgage for the entire consideration, or subject to a mortgage for that amount, already on record.

The association will then own the real estate, and the former owners the mortgage.

The corporation will then be in a condition to sell its lands, which should be carefully laid out into lots and plots, of various sizes and shapes, depending on the grade of the ground, etc., and a map made of the same. The lots to be sold subject to such conditions and restrictions as may be thought proper to impose, to be embodied in the deed.

Provisions should be made in the mortgage to have the lots, as they are sold, released from the mortgage, on payment of the whole or some portion of the consideration money received on the sale; the amount paid, in such case, to be seventy-five per cent. of the sum received. This would leave twenty-five per cent. in the hands of the trustees, to constitute a fund for distribution among the lot proprietors, after providing for the opening and grading of streets, and for general improvements and incidental expenses. And, as a protection to the holders of the mortgage, a further provision should be inserted, to the effect that the lots should not be sold for less than a specified sum, named therein, except with the consent of the mortgagees.

It will be seen, that the only indebtedness of the association would be the mortgage. This should be paid off as fast as possible, with the proceeds from the sales of lots; and, at least, sixty per cent. of the proceeds is required by the Statute to be applied to the payment of this indebtedness until it is fully paid.

The portion of the proceeds reserved by the association, as well as the entire proceeds after the mortgage is paid, to be distributed among the lot-owners, after deducting sufficient to pay the taxes and incidental expenses, and for necessary improvements to the property.

The lot proprietors would thus receive the entire proceeds of sales, except what was necessary for the purposes mentioned; and, in this distribution, they would share equally, according to the value of their respective lots, to be estimated at the sums paid for them to the association.

II. PROPOSED PLAN FOR ORGANIZATION UNDER SECTION SEVEN:

A party of twelve, or other number, purchase three hundred acres of land for the purpose of laying the same out into lots and plots on Villa Park plan, and then organize themselves into a corporation under the Statute.

The three hundred acres are then to be conveyed to the association, and the grantors to take from the association, as the purchase-price thereof, an agreement to pay for the same, seventy-five per cent. of the proceeds of all sales of lots and plots made from the lands.

The interest represented by the agreement, to wit: the said percentage, to be divided into twenty-five hundred equal shares, transferable on the books of the association in the same manner as stock is usually transferable; and certificates to be issued for the same, substantially in the form of ordinary stock certificates.

The persons owning the shares to be entitled to vote for trustees, and to have one vote for every five shares of stock standing in their names respectively on the books of the association; provided, that when all the lots are sold to bona fide proprietors, the right of shareholders thereafter to vote shall cease.

The agreement to contain a clause fixing the prices of the several lots included within the lands; the prices not to be changed, except with the consent of a majority in interest of the shareholders.

Such an agreement being made between the owners of the property and the association, the situation would be as follows:

1. The association would own the real estate, and the grantors would, as the purchase-price thereof, be entitled to receive seventy-five per cent. of the proceeds of all sales of lots made from the same. The balance of the proceeds, twenty-five per cent., would go to the association, to be applied and distributed as prescribed in sections six and seven of the Statute.

2. The owners of the seventy-five per cent. of the proceeds would have five hundred votes in any election for trustees, or one vote for every five shares; and the lot proprietors would have one vote for each lot of the dimensions of twenty-five hundred square feet (a city lot 25 by 100) purchased from the association.

3. The association would be represented by trustees who were lot-owners. And, after all the lots were sold, only lot-owners would be entitled to vote for trustees; and, thus, the corporation would be exclusively under their control. The purchase-price of the land having been fully paid by the sale of all the property, the shareholders would cease to have any interest in or control over the association.

4. The association would always have important duties to perform in respect to the property. Its business would be to sell the property to those who would build upon and improve it, and to see that the lot proprietors abide by the rules annexed to their deeds. It would, besides, have the control and supervision of roads and highways, as well as lands within the grounds set apart for parks and public places, or otherwise reserved by the association.

The foregoing plans may be modified in many ways; thus, for illustration:

Associations may purchase any number of acres, from one to three hundred.

In the case of organizations under section six, they may buy for cash, or for part cash and part mortgage, or may leave the entire consideration on mortgage, as in the plan proposed. Any number of persons together may organize under that section, and they may at once partition the property among themselves, according to the amounts paid by them respectively, or otherwise, as they may agree; or they may keep a portion of the property for themselves and sell the remainder, distributing the proceeds of the part sold among the lot proprietors in the manner provided by the Statute.

The percentage of the proceeds of sales to be paid for the land, where the organization is under the seventh section, may be fixed at any rate the parties may agree upon, thus giving to the lot proprietors a greater or smaller percentage, according as it may be desirable to interest them in the property. The parties may agree, too, in respect to the number of shares into which the interest of the shareholders shall be divided; and also in respect to the number of votes the shareholders will be entitled to in the election of trustees; otherwise, however, as to lot proprietors, their vote being definitely fixed by the Statute.

Other modifications of the plans proposed may be made, besides those stated, depending upon the circumstances of each case, the Statute being sufficiently general to allow great variety in the details.

In conclusion, it may be said, that the Statute is most radical and far-reaching in its consequences, possessing features that are novel and unusual, yet practical and sensible; and justifying the prediction, that, if made available generally for the purposes intended, it will prove one of the most valuable and beneficent acts ever passed by the Legislature.

AN ACT AUTHORIZING THE INCORPORATION OF SUBURBAN HOMESTEAD AND VILLA PARK ASSOCIATIONS, PASSED MAY 25, 1881.

SECTION 1. Any number of persons residing in this State, not less than five, who shall desire to form an association for the purpose of purchasing, holding, improving, and disposing of lands for suburban homesteads or residences, or for a villa park, may meet at such time and place as they, or a majority of them, may agree, and appoint a chairman and secretary by the vote of a majority of the persons present at the meeting, and proceed to form an association by determining on a corporate name by which the association shall be known, the number of trustees to manage the concerns of the association, which number shall not be less than three, nor more than twelve, and the day in each year upon which the future annual elections of trustees shall be held, and thereupon may proceed to elect by ballot the number of trustees so determined on; and the trustees so elected shall hold their offices for one year, and until their successors are elected.

SEC. 2. The chairman and secretary of the meeting shall, within three days after such meeting, make a written certificate and sign their names thereto, and acknowledge the same before an officer authorized to take the proof and acknowledgment of conveyances in the county where such meetings shall have been held; which certificate shall state the names of the associates who attended such meeting; the corporate name of the association determined upon by the majority of the persons who met; the number of trustees fixed on to manage the concerns of the association; the names of the trustees chosen at the meeting, and the day fixed on for the annual election of trustees, which certificate shall be recorded in the Clerk's Office of the county in which the meeting was held, in a book to be appropriated to the recording of certificates of incorporation, and a duplicate thereof filed in the office of the Secretary of State.

SEC. 3. When the certificate shall have been filed and recorded as aforesaid, the association mentioned therein shall be deemed legally incorporated, and shall have and possess the general powers and privileges, and be subject to

the liabilities of a corporation. The affairs and property of such association shall be managed by the trustees, who shall annually appoint from among their number a president and a vice-president, and shall also appoint a secretary and a treasurer, who shall hold their places during the pleasure of the board of trustees.

SEC. 4. Any association incorporated under this Act may take by purchase, devise or gift, and hold within the county in which the certificate of its incorporation is recorded, not exceeding three hundred acres of land to be held and possessed by it for the purposes mentioned in the first section of this Act. The trustees may sell and convey the said lands, or any portions thereof, for such price, and upon such terms as they may deem advisable; and subject to such conditions and restrictions as may be imposed upon the same by rules and regulations to be adopted by them and inserted in, or annexed to, conveyances of the same. Any such association may hold personal property to an amount not exceeding ten thousand dollars, besides what may arise from the sale of lots and plots.

SEC. 5. The annual election for trustees shall be held on the day mentioned in the certificate of incorporation, and at such hour and place as the trustees shall direct. The trustees chosen at any election subsequent to the first shall hold their offices for one year, and until others are chosen to succeed them. The election shall be by ballot, and every person of full age who shall be the owner or holder of one or more lots or plots containing not less than twenty-five hundred square feet of land purchased from the association, or the owner or holder of a sufficient number of the shares mentioned in the seventh section of this Act, to entitle such person to vote according to the terms of the agreement authorized by said section, or if there are more than one owner or holder of any such shares, or of any such lot or plot, than such one of them as the majority or joint-owners or holders shall designate to represent such shares, or such lot or plot, may, either in person or by proxy, give one vote for every one or other number of such shares, as authorized and specified in said agreement, and one vote for each lot or plot of the dimensions aforesaid; and the persons receiving a majority of all the votes given at such election shall be trustees to succeed those whose terms of office expire; but in all elections after the first the trustees shall be chosen from among the proprietors of lots or plots. Vacancies in the office of trustee, or of president or vice-president, may be filled in such manner as shall be prescribed by the by-laws of the association; and public notice of the annual election shall be given in such manner as shall also be prescribed by such by-laws.

SEC. 6. At least sixty per centum of the proceeds of all sales of lots and plots shall be first appropriated to the payment of the purchase-money of the lands acquired by the association, until the purchase-money shall be paid; and the residue thereof, as also the proceeds of all sales thereafter made, shall be applied to the payment of the taxes and assessments against the lands of the association, and to preserving, improving and embellishing such lands, and the roads or avenues and walks therein, and leading thereto, and to defraying the incidental expenses of the association; provided, that any proceeds remaining after the payments aforesaid, and after providing in a reasonable manner for expenses and improvements to be thereafter made and incurred, may, upon the vote of two-thirds of the trustees in favor thereof, be distributed among the owners of lots purchased from the association; such proceeds to be distributed equally among such lot-owners according to the value of their several lots, to be estimated at the sums paid for the same to the association, or otherwise, as provided in the by-laws of the association.

SEC. 7. Associations formed under this Act may agree with the person or persons from whom its lands, or any part thereof, shall be purchased, to pay for such lands, as the purchase-price thereof, any specified part or portion of the proceeds of all sales of lots and plots made from such lands; in which case the part or portion of such proceeds so agreed upon shall be first appropriated and applied to the payment of the purchase-money of the lands so acquired; and the residue thereof shall be applied and distributed in all respects as provided in the last preceding section in respect to the residue of proceeds therein mentioned. The part or portion of the proceeds constituting the purchase-price of the lands may be divided into as many equal shares as may be agreed upon between the association and the person, or persons, from whom the said lands are purchased; and the said shares shall entitle the owners thereof to such number of votes at any election for trustees of the association, and shall be transferable on the books of the association in such manner as shall also be agreed upon between the said parties. In all cases where lands shall be purchased and agreed to be paid for in the manner herein provided, the prices for lots or plots specified in the agreement between the association and the person, or persons, from whom the said lands were purchased, shall not be changed without the written consent of a majority in interest of such persons, their heirs, representatives or assigns.

SEC. 8. The trustees at each annual election shall make a report to the lot-owners of their doings, and of the management and condition of the property and concerns of the association. If the annual election shall not be held on the day fixed in the certificate of incorporation, the trustees shall have power to appoint another day, not more than sixty days thereafter, and shall give public notice of the time and place at which time the election may be held, with like effect as if holden on the day fixed on in the certificate of incorporation. The terms of office of the trustees chosen at such time shall expire at the same time as if they had been chosen on the day fixed by the certificate of incorporation.

SEC. 9. Any person who shall willfully destroy, injure or remove any statuary, fence, building, or other structure, placed on the grounds of any association incorporated under this Act, or who shall willfully cut or injure any tree, shrub or plant within the said grounds, shall be deemed guilty of a misdemeanor; and such offender shall also be liable in an action of trespass to be brought in the name of such association, to recover damages caused by such unlawful act or acts.

SEC. 10. Any association incorporated under this Act may take by gift, devise or bequest, and hold any property, real or personal, upon trust, to apply the income thereof under the direction of the trustees of the association for the improvement or embellishment of the grounds of the association, or the erection, repair or preservation of any statuary, fence, buildings or structures erected, or to be erected upon the same, or in planting trees, shrubs and flowers, in the grounds of the association, or for improving or embellishing such grounds, in any other manner or form consistent with the design and purposes of the association, and as specified in such gift, devise or bequest.

THE HABITATIONS OF MAN IN ALL AGES

BY VIOLLET-LE-DUC

Translated by BENJ. BUCKNALL, Architect

CHAPTER XI.

THE GREAT MIGRATIONS.

TO the south of a chain of barren mountains stretches a vast gravelly plain. Here and there in the neighborhood of streams are meadows and stunted trees. In summer these streams, confined within precipitous banks, are almost dry. In winter, on the contrary, they overflow and inundate part of the lands, bringing down with them mud and gravel. Winds from the east continually sweep these plains, and all vegetable growths bend towards the west.

Men are seen in these deserts only occasionally; passing southwards in winter, and towards the mountains in summer. Of nomadic habit, they drive their flocks and herds before them, but do not tarry in the arid plain.

We observe, however, a long train of wagons journeying westwards. They are filled with women, children, furniture, poles and boards; drawn by oxen and asses, they are conducted by men for the most part on horseback. A cloud of dust accompanies and precedes them. The sun is scorching, and the caravan moves forward with painful effort. At some distance in its rear, follow beasts of prey, which, with outstretched necks, are snuffing the air, stopping for a moment, or moving hither and thither. If some beast of burden, exhausted by fatigue, has been abandoned on the route, these beasts of prey immediately fall upon it, fight furiously around it, and tear off portions of its flesh, which they carry away to devour. Flights of birds of prey accompany the column on its flanks, uttering ominous cries.

The horseman who guide the caravan are tall, muscular and sunburnt; their features are handsome, and their clear bright eyes inspire respect. They are dressed in white tunics with short sleeves, their legs are bare, and they are shod with sandals fastened by thongs. Their head-dress consists of a kind of ball covered with white stuff, and sometimes terminated by a narrow veil which falls as far as the middle of the back, and protects the nape of the neck.

The women, seated or reclining in the wagons, are completely enveloped in veils of light stuff edged with rich embroideries of various colors. Their skin, shaded from the sunshine, is white, and their limbs are delicate. They are of medium height; and a mass of light chestnut hair falls over their shoulders in thick plaits.

Among the more youthful some may be distinguished as remarkably beautiful. They are conversing and laughing together.

Between the wagons flocks of sheep, long-horned goats, and herds of heifers are being driven along, over which large black dogs with

pointed ears and sharp noses are keeping watch, panting as they go.

In the evening the caravan halts on the bank of a stream partly dried up; the cloud of dust follows its course westward; and soon a great stir is observable in the long train. The sheep are bleating, the dogs barking, the heifers and the oxen uttering their deep lowings, amid the shouts of the men and the neighing of the horses. The women and children are getting down from the wagons, from which the poles and large rolls of woollen stuffs are being taken; for the caravan anticipates a long sojourn in this place. The poles are fixed in the ground and fastened together with thongs; next the boards are put across, and the stuffs cover the whole. Thus a great number of huts are set up, all presenting the same appearance (figure 41), and



TENT OF THE ARYA IN THE DESERT.—FIG. 41.

consisting of a low room in which at night the horned cattle are housed. The family ascend to the upper part by a short ladder. In front is a sort of porch; it is the place for rest in the daytime. When the sun is set we see fires lighted in every quarter; the women prepare

the meals, and all take their food by the light of the flames. Soon afterwards the sheep are folded near the huts, the horses are tied to the stakes of the porches, and the horned cattle brought in. The families one after another ascend to their booths to sleep, and let down the awnings, for the nights are cold. Each man in his turn watches beneath the porch and keeps up the fire. The lion, disdain- ing to follow the caravan by day, sometimes presents himself in the middle of the night, alone, with head aloft and measured tread. He prowls around the encampment, watches his opportunity, and at a bound, strangles a horse or an unwary watcher. Shouts arise on all sides, and the men armed with bows, heavy clubs, or lances, fall upon the terrible animal. These incidents are of rather frequent occurrence; a good watch, therefore, is kept in the encampment; and in certain places ditches are dug, concealed by branches of trees and grass on which a dead animal is placed. But the lion is rarely seduced into these traps, while hyenas are often caught.

The lion never repeats his attack, and if he fails to secure his prey he retreats. But if he is wounded by one of the watchers he becomes furious, and then there is a terrible combat lasting sometimes far into the night. The men issue from all quarters, and no one in the camp sleeps.

The tents are set up only when it is intended to make some stay in a place, to give rest to man and beast. At such times the men employ themselves in hunting, for game never fails in these deserts, while the women repair the harness and clothing.

Epergos on a certain evening fell in with one of these encampments. Being unarmed he excited no mistrust, and as he was without baggage, no cupidity. Moreover he had much serviceable knowledge; for example, that of remedies for man or beast in case of disease. Accordingly he had not spent more than four-and-twenty hours among them when he had secured a welcome from the migrating colony.

Sometimes the men entrusted with the safety of the encampment would unite in groups of twos or threes, and to keep themselves awake would talk of the incidents of the past or of their hopes for the future. Epergos liked to interrogate them and to hear their recitals. So one night he sat down by one of the watchers, a gray-bearded man, who gave him the statement that follows:

"It is twenty years since we left the shores of the great river which descends from the Holy Mountains; I was then young, and we had been obliged to abandon our dwellings in consequence of a battle in which half our able-bodied men had perished."

"Were those who defeated you of a different race?"

"No, they were of the same blood."

"Then why these battles?"

"We possessed fertile lands and pleasant dwellings at the foot of the Sacred Mountains, not far from the place where the great river passes them to flow southwards.

"Our fathers had been settled there for a great number of years. But from the mountains and from the great plateau which is on this side to the north, there came down tribes desirous of enjoying the riches of the soil. At first our fathers received them with pleasure, for they saw in them brethren who spoke the same language and resembled themselves. At first there was no want of land, and all could have a share. Fresh tribes, however, were always arriving from the mountains; for you know that Mount Meron is the great cradle of the noble race. One day we were obliged to tell the newcomers that the land was full and that they would not be able to find a place. Many went southwards in the hope of finding fresh lands; others bent their course towards the rising sun.

"It seems that a great number perished, for they had to contend with nations numerous as the pebbles of the torrent. Some perhaps went further. We were none the less subjected to constant embarrassments in consequence of the number of tribes that continued to pass over our lands. That was the cause of our disasters. We wanted to compel the mountaineers to follow another route, and to leave us to the peaceful enjoyment of our possessions. We took up arms, and for several seasons we caused our territory to be respected. But at last, by dint of ever-increasing numbers, these mountaineers ended in surrounding us on all sides. The struggle was terrible. There I witnessed the death of my father, my brother, and many of my kin.

"The victors then wished to impose conditions upon us; rather than submit to them, having collected our flocks and herds, and

placed the women and children and our most valued property in wagons, and set fire to our houses, we quitted the land of our fathers; and in order that we might not encounter on our way that great body which had gone towards the rising sun or towards the south, and that we might not have to blush for our defeat among them, we betook ourselves towards the setting sun, keeping near the mountains."

"It is twenty winters, you say, since then?"

"Yes; twenty winters, and many of our number have died; and children have been born. In order to find the means of living along our route we separated into twelve bodies, and we march at intervals of a year."

"Will you give me a full account of your adventures?"

"When we had all left our possessions, our number being about twenty thousand, including men, women, and children, we reached after five or six moons a chain of high hills, which stretch from the Sacred Mountains towards the south. We had lost many of our people in consequence of the privations we had to suffer and the want of sufficient nourishment; for we had nothing to live on but our flocks and herds and what we found on our route.

"There we resolved to stay and settle if possible; the country presented an inviting appearance; it was well stocked with game and watered by numerous rivulets.

"In this country the cursed race of the Dasyus swarmed in great numbers. Timorous and feeble, we had easily subjugated them. We compelled them to till the ground, tend our herds, and supply us with food. We had already begun to build houses, and the lands were apportioned among us, when these wretches dared to attack us, for they were very strong in numbers. That fatal night still lives in my remembrance. . . . The wind was raging violently. It was just at the time when the snows begin to disappear from the slopes of the mountains. Confused cries warned us of the danger, and fires soon broke out in the plain. Most of us inhabited the higher grounds, enabling us to see to a distance. Our people assembled in small bodies in haste, but the tempest prevented us from hearing each other's voices and acting in concert. Women came running towards us wild with despair; the Dasyus, armed with clubs, were killing all they met, and setting fire to dwellings—advancing in a compact mass, howling furiously. Thus suddenly attacked, all would be lost, if the wretches should gain the heights. Each group perceived the danger, and without losing time in endeavoring to join that near it thought only of bravely defending itself.

"With wagons, unfinished houses, rocks, and trees, they made themselves a rampart; and when the scoundrels came on like a herd of wolves, they were assailed from every quarter by darts, stones, and sharp arrows.

"Having no plan of action, and seeing many of their number fall, they recoiled. This enabled those of us who were farthest off from the attack to unite in bodies large enough to take the offensive. We made a great massacre of the wretches. But advancing day showed us how numerous they were; for some of the neighboring tribes had joined those among which we lived.

"We should have been wearied to no purpose, if we had gone on mowing down these scoundrels like the rushes of the marsh; the mass was so dense that we should always have found some left to kill. We therefore retired to the heights, taking with us our most valuable movables in our wagons. Having held a council the following night, we resolved to pass the mountains, and to seek in the direction of the setting sun a less populous territory.

"Having cut down trees to form a rampart, we left behind us a thousand of our warriors, who were to stop the advance of the Dasyus while the retreat was being effected.

"In this passage across the mountains, we lost a great number of horses and wagons. Women and children died of cold during the nights. But the Dasyus did not attempt to pursue us. At the end of eight days we came down into a desert plain, but where game was not wanting. There we remained several moons, living by fishing and hunting and on what remained of our cattle. It was then that we resolved to pursue our search for homes towards the west; taking care to go in separate bodies, so as not to exhaust the country, and that we might always find game.

"What more need I say? Keeping always on the flanks of the mountains, so that we might meet only rivulets or torrents narrow

enough to be easily crossed, we also found wood, game and sometimes shelter in the forests. Stopping where life was most tolerable we reached this place."

"And did many other detachments pass before you?"

"We form part of the last."

"Do you know whether those who went before you have taken up a fixed residence?"

"They have done so; for we have always kept up a communication between the different detachments by messengers who travel several together."

"And what have you learned by these means?"

"That our predecessors have settled in a fertile country, watered by numerous rivers, and bordered by two chains of mountains, seven days' march apart, and both stretching towards the setting sun. On the northern side, beyond one of these chains of mountains, is a vast extent of salt water which is the end of the earth. There are also great lakes of fresh water. Near the mountains, on the southern side our brethren have settled and have built houses."

"And did your brethren find men in these countries?"

"They found men with a dark skin, but they drove them away."

"And what were the occupations of these men?"

"They kept flocks and herds and lived in tents made of skins of beasts. This is what the traveling messengers reported to us."

"We are eager to reach that land where our brethren are happy, surrounded by their numerous and prosperous families, possessors of vast domains. We shall fight with them against the men of the north, and those who come from the south to spoil them of their goods; for the man of noble race is born to fight to establish his power over the accursed races, and to be the master of the earth."

CHAPTER XII.

HOW THE EARLIEST DWELLINGS OF THE ARYAS SETTLED IN UPPER MEDIA WERE CONSTRUCTED.

THESE emigrants who had made their way from the valley of Cashmere, and had settled at first on the upper course of the Indus, were thus slowly traversing the southern slopes of the long chain of mountains which stretches from Mount Meron to the Caspian Sea. They had settled there in a fertile country, sheltered from the north wind by the Caspian Mountains, and from the south wind by Mount Zagrus—the chain bearing that name being parallel to the Caspian Mountains. Divided as is their custom into tribes, they had built small straggling towns, between whose houses were spaces reserved for tillage and pasture. This country, which occupies an elevated position and is crossed by mountains, though somewhat cold in the winter season is very hot in summer. The emigrants had found races already settled in this country: some of them were living in caverns, hollowed out by natural causes or laboriously excavated; they occupied the slopes of the hills, and were black; the others, who kept to the plains, lived in tents, were nomad in their habits, and possessed numerous flocks and herds on which they subsisted. These had a yellow skin with hair and eyes black; they were daring and predatory, and followed no industrial pursuits.

Not being accustomed to assemble in large numbers to fight, they retired gradually before the Aryan emigrants in a northerly and westerly direction, not without having done all possible damage to the new settlers.

The Aryas, therefore, soon found themselves isolated and obliged to provide for their own wants. In these regions they had no longer around them, as on the Upper Indus, a numerous and submissive native population whom they could compel to work. The pastoral race that occupied this district before them, had neither cities nor villages, followed no industrial occupation, and despised all manual labor. Proud and barbarous, and continually changing the place of their abode, it was impossible either to subjugate or to plunder them, since they possessed nothing but wandering herds.

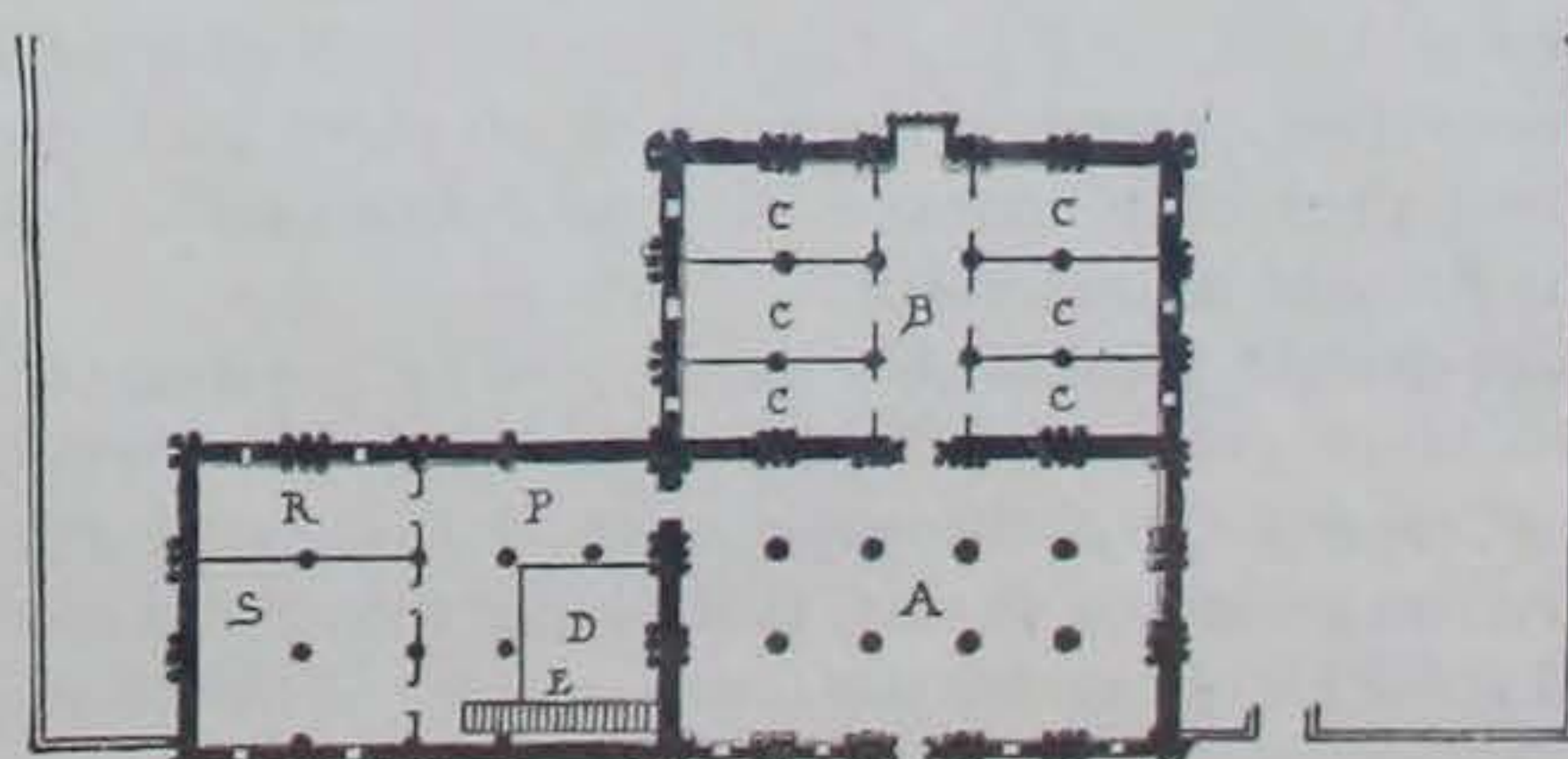
As to the black inhabitants of the mountains, they were an abject race, subsisting by the chase and on wild herbs,—in any case, unable to assist the colonists, even had they the will to do so. The latter, moreover, still too small in number and too ignorant of the country, dared not risk themselves in the mountain defiles occupied by the blacks. Those of the Aryas who had attempted to penetrate into the gorges of the Zagrus range had not returned.

For some time the Aryas were satisfied to live in huts such as had been their dwellings in the desert; but these habitations did not preserve them from heat or cold, and were liable to be destroyed by the tempests that not unfrequently arose between the two mountain chains. They wished, therefore, to erect houses like those of their fathers, wood being abundant. These dwellings, however, in a country where extremes of temperature prevailed, scarcely sheltered their inhabitants better either against frost or sun. They had observed that the blacks who lived nearest the valleys—the only race with whom they could carry on barter—in default of natural caverns had constructed for themselves actual burrows, by hollowing out the ground, and raising round the ditch a wall of pebbles and mud, placing across these very low walls trunks of trees covered with a thick layer of kneaded earth.

These dwellings which were cool in summer and warm in winter, but always damp, low, and noisome, could not approve themselves to the Aryas; but reflecting that the nearly equal temperature of these sordid abodes at all seasons of the year was owing in great part to the thick layer of earth which served as roofing, they resolved to employ the same method, though with interiors not below the level of the ground.

Blows with a stick, and the prospect of a regular supply of food, induced a considerable number of the blacks to labor in building the new dwellings of the Aryas. But the first attempts were not successful. The walls of mud and pebbles which, when scarcely so high as a man, would support the transverse trunks of trees that formed the ceiling, gave way under the load when it was attempted to raise them higher. Moreover, the settlers wished to have spacious rooms, and the mass of earth superposed made the beams bend, rendering props necessary. On the whole these new dwellings presented, in spite of the exertions of the colonists, a very singular series of tentative efforts when the last caravan of emigrants arrived in Upper Media.

The first thing to be done was to allot lands to the newcomers whom Epergos had joined. He had acquired a certain degree of authority among them, for on several occasions the emigrants had had reason to congratulate themselves on having adopted his suggestions. He was, therefore, consulted as to the most suitable method of erecting houses with the materials at hand, and so as to meet the requirements of the climate. Epergos remembering the methods he had seen adopted on the Lower Nile, and considering that the country possessed wood in abundance, and that the Aryas had long been accustomed to employ this material, spoke thus to those who consulted him: "As you recognize the advantage of employing earth, both for raising walls and covering the ceilings of your dwellings, to preserve you from cold and heat, while you perceive that an erection



PLAN OF MEDIAN HOUSE.—FIG. 42.

made with earth needs a support, because it has not consistence enough to sustain itself—why do you not make a skeleton of timber, not only substantial enough to resist the storms, but also to keep up the earthen walls and ceilings? You want large rooms;—well, then,

prop up the ceilings with trunks of trees, so that they will not bend under the load. In a word, make a house of wood and cover it with earth."

They set to work, therefore, and soon obtained satisfactory structures. Figure 42 shows a plan of one of these houses. Conformably to the custom of the Aryas, the habitation being placed on an elevated spot, or on a raised platform, commanded a view of the vicinity.

A large room A was set out, and to support its heavy ceiling, eight trunks of trees forked at the top divided it into three bays. Adjoining this was a passage B, communicating with six chambers, and at the end a small sanctuary; for as the Aryas had then temples and priests, the religious ceremonies were no longer performed in every family. At D a small court with a portico C, communicating



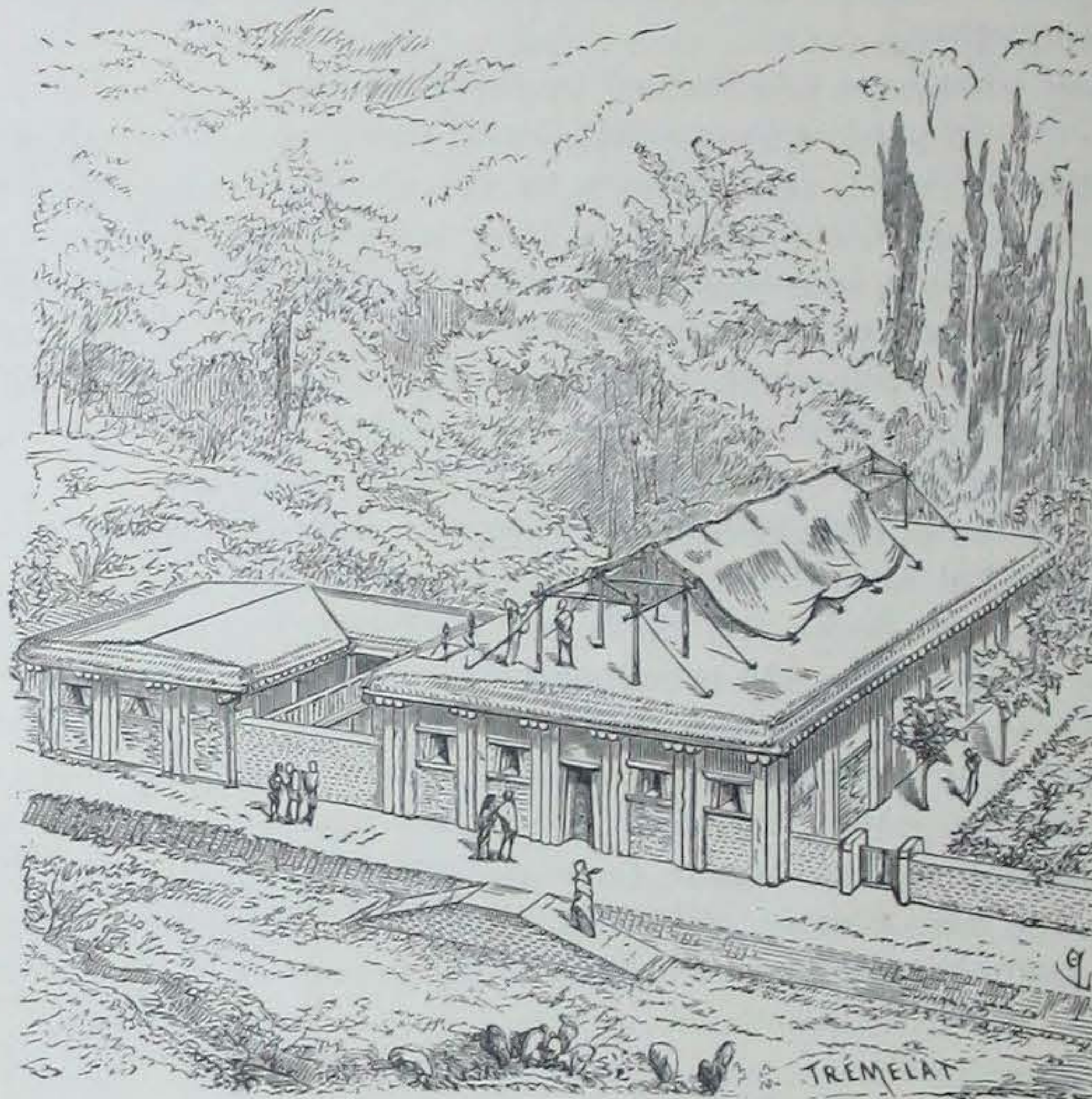
INTERIOR OF MEDIAN HOUSE.—FIG. 43.

with a kitchen R, and the rooms allotted to the servants or dependants. A flight of wooden steps gave access to the terrace of the main building. As indicated in the plan, the buildings were constructed with trunks of trees, placed vertically in double threes, leaving the thickness of a wall of earth between them, and of forked posts. These posts received on their fork (see figure 43, which represents the interior of the large room), a cap consisting of a thick trunk end split into two. On each of these caps were laid three horizontal trunks of trees, which were supported at their ends by the three interior and the three exterior vertical trunks. Next, on these cross timbers were placed other trunks longitudinally forming a ceiling within and a projection without, to protect the walls from the rain. Thus the whole building being raised in wood, they filled the intervals with pebbles and earth, and on the ceiling placed a thick layer of earth and stubble well kneaded, and then of moistened clay and fine sand. Inside, mats covered the floor of beaten earth.

Figure 44 gives a view of this habitation in perspective. During summer they put up tents on the terraces to enjoy the fresh air of the evening and also to sleep there; a method suggested by the habit acquired by the colonists during their long sojourn in the desert, of passing all their nights under the tent, and by their feeling uncomfortable in shutting themselves up to sleep during the hot season.

Half a century after their settlement in Upper Media, the Aryas had attained a condition of prosperity, had become very numerous, and had begun to give some degree of elegance to their dwellings by dressing the wood with an axe and adorning the walls with paintings. They were acquainted with the art of manufacturing woolen stuffs variously dyed, and began to give themselves to culture; for they had succeeded in enslaving many of the black inhabitants of the mountains, whose defiles were henceforth known to them, and used for hunting grounds.

Several of their number during the great expeditions undertaken with a view to hunt wild animals and horses (of which there were numbers at large in the country), had sometimes crossed the Zagrus chain, and had observed beyond it an immense and rich plain inhabited only by shepherds who possessed large flocks. These Median hunters, who went out in large bodies, had sometimes even succeeded in carrying off some of these flocks; so that the Medes nearest the



VIEW OF MEDIAN HOUSE.—FIG. 44.

mountains began to assemble in considerable troops, and traversing the defiles, would fall suddenly on the shepherds, and drive off the cattle, which they sold as soon as they returned to Media.

These repeated expeditions irritated the shepherds, and having concerted a place of ambuscade, they attacked and massacred a large body of hunters. Great was the excitement through all Media, and it was resolved to take vengeance on the shepherds.

To the number of about four thousand men, the Medes issued from the southern mountains, and spread through the level country, carried off a considerable number of cattle, and killed all who offered resistance.

The shepherds, assembling in their turn, passed the mountains, and fell suddenly on the lands of the Medes nearest the defiles, killed the inhabitants, burned the houses, and plundered the fields. They spared only the women, whom they carried away with them.

CHAPTER XIII.

THE NOMADIC AND THE STATIONARY SEMITES.

TALL and lean, with skin of bistre tint, slender limbs and black hair, the Semites form that large pastoral population which occupies all the territory watered by the Tigris and Euphrates. They live in tents, and cultivate a few fields, sometimes at one spot, sometimes at another; for they are not accustomed to tarry long in the same place. They have neither cities nor villages. Temperate in their habits, their flocks and scanty crops suffice for their subsistence, dress, and dwellings,—which are only tents of stuffs made of camels' hair and wool. The horse is their faithful companion; for they never travel on foot. They take as many wives as they can support. Sometimes the dryness of the season obliges them to go in search of distant pastures, or destroys their cattle. Then they assemble in large bodies, and fall upon the neighboring country, where they hope to find booty. Thus they have often harassed the peoples of the

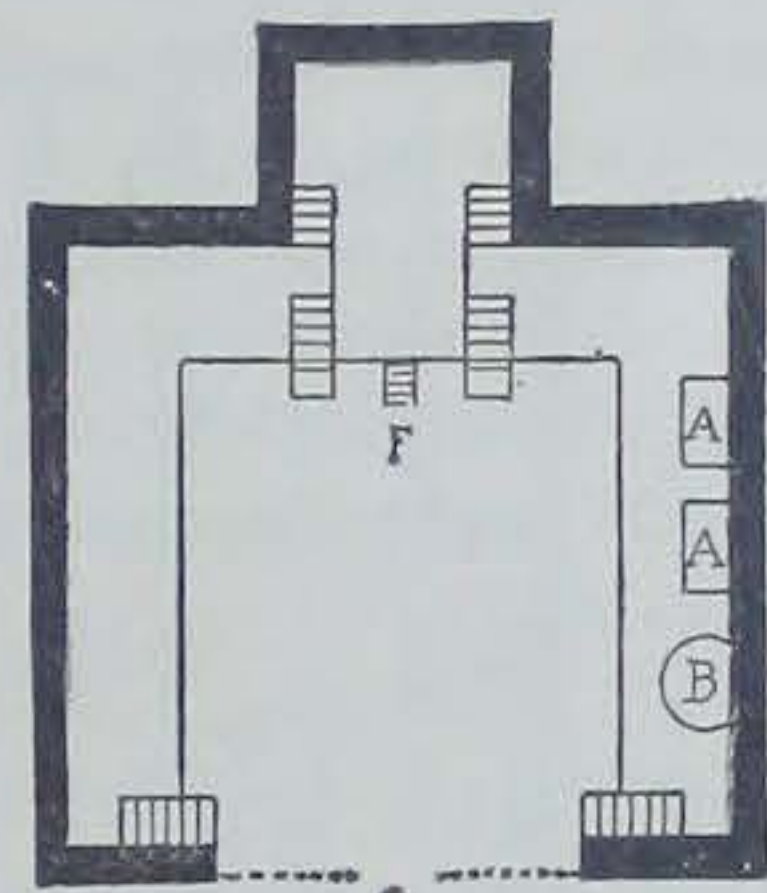
Lower Nile, for they do not hesitate to traverse the desert in search of plunder.

They may be vanquished, but they cannot be subjugated, since they are not attached to the soil, and elude pursuit. The desert is theirs, and if they take possession of an inhabited region, they drive away or kill its inhabitants, and turn it into a desert. They have no industrial pursuits or arts, though on occasions they traffic with more address and skill than probity. Nevertheless they practice hospitality, and the stranger who is admitted among them has nothing to fear, especially if he has no property.

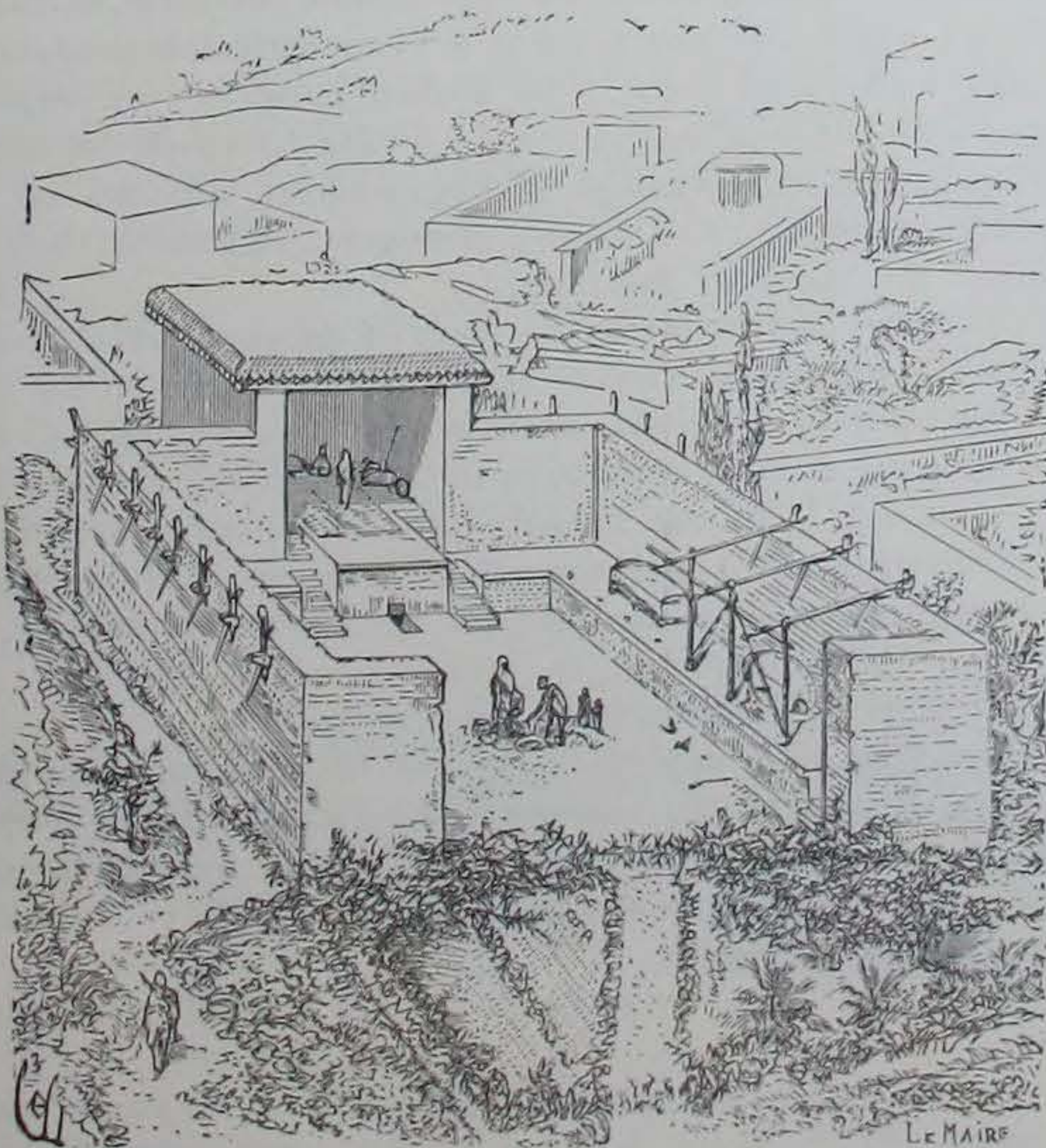
As regards the stationary Semites, they occupy the western region between the shores of the interior sea and the right bank of the Upper Euphrates. They engage in commerce and in certain industrial pursuits, have ports, and sail to distant lands. The districts they inhabit are mountainous, dry, and arid; there are only sixty days in the year on which rain falls, and the torrents which descend from the mountains are quickly dried up. The country, however, is cultivated; for the inhabitants construct vast tanks which receive water during the rainy season, and enable them to irrigate the ground.

Contrary to the Aryan custom, their houses are in groups, and form cities or straggling towns surrounded by walls to protect them against the incursions of the nomadic Semites and the men of yellow race, who sometimes make an onslaught from the north. They also construct large vessels, in which they cross the sea, and carry on commerce along the shores of the Delta. On the south, their country is bounded by the desert, and extends nearly to Lower Egypt.

The following is the method in which they usually build their dwellings, figure 45. Around an area of 25 to 30 cubits they build a thick wall of pise or dry stones, leaving a void space in front, and forming a quadrangular space of about 8 cubits on the opposite side. Along this wall, in the interior, they raise a platform of about 4 cubits wide and 2 cubits in height at most. At the further end the platform is a little higher. Small flights of steps facilitate the ascent to these platforms. Only the recess at the back is covered in a permanent way by means



PLAN OF PRIMITIVE SOUTHERN SYRIAN HABITATION.—FIG. 45.



VIEW OF PRIMITIVE SOUTHERN SYRIAN HOUSE.—FIG. 46.

of trunks of palm-trees or cypress placed close together, on which a floor is made of kneaded earth. It is there that the family sleep at night, and shelter themselves by day from the sun.

During the rainy season light frames of canes are erected, on which mats are placed.

On these platforms troughs of pise (at A) are constructed, in which provisions are kept; and a small circular fowl-house also of pise at B. A fire is lighted in the middle of the area for cooking. A thorn hedge protects the open side, and the entrance c is closed by a thorny trunk placed across it. Under the platform at the back end a cistern is excavated, to which there is a descent by the small flight of steps f.

Figure 46 gives a view of these dwellings, which sometimes have very small gardens in front. Rich families possess larger dwellings, but which are all constructed on the same principle. In these, rich stuffs sometimes take the place of mats, and woolen carpets cover the floor of the recess.

Paintings on coatings of earth garnish the walls, and in place of a hedge are placed strong barriers of painted wood artistically worked. Curtains shut in the recess.

No great length of time had elapsed since the earliest expeditions of the Medes into the territory of the Semites, when fresh bodies of Aryan emigrants advanced along the Caspian mountains. Land in sufficient quantity was no longer to be found, and the new-comers were not received as brothers, but as troublesome strangers. The last in the field, however, were not disposed to retrograde, and saw with envious eyes the prosperous establishments of their predecessors. This occasioned frequent contests; and as fortune favored sometimes one party and sometimes the other, and peace was incessantly troubled without any advantage to either, the chiefs of the tribes assembled, and came to the determination that since the territory of Upper Media could not support so many families, a great expedition should be organized, to occupy the lands on the southeast, beyond the mountains, and to drive away the shepherds, since they had always to dread their depredations.

BUT on descending towards the south, on the shores of the Tigris and the Euphrates, the emigrants found no longer nomadic peoples, but cities and villages. During a long course of years the emigrants from Media had to carry on a struggle with the peoples settled on the fertile shores of these two rivers, but at last they subjugated them, and were blended into one nation with them.



CHAPTER XIV.

THE ASSYRIANS.

A LONG time afterwards, the country watered by the Tigris and Euphrates formed the rich and powerful kingdoms of Assyria and Babylon. They were conquered by Thoutmes III, a king of the eighteenth Egyptian dynasty; but this conquest only brought into that country elements of civilization and art, which were still wanting to render it the queen of Western Asia.

The Assyrians, however, did not submit to the conquerors without struggles; and having formed a league with the other peoples of Asia, they ultimately enfranchised themselves from Egyptian rule under Ramses II and Ramses III. Soon afterwards they subjugated Media, their parent state.

Till the epoch of Egyptian supremacy, the Assyrians, like their neighbors the Medes, erected only very simple buildings, destitute of ornamentation. They made it a principle not to make sculptured

representations of the divinities; but the country which they occupied had necessitated certain modifications in the structure of their habitations.

The shores of the Tigris and Euphrates present only alluvial plains; wood suitable for building, is rare. For ten months of the year, no cloud appears in a sky whose clearness is incomparable. The heat is oppressive and incessant.

With their taste for the arts, the Egyptians had introduced into these regions their astronomical and geometrical knowledge, a civilization of some degree of refinement, and an exact and rigorous administrative organization. If the populations on the shores of the Tigris and Euphrates were able to profit by these advantages, they at the same time lost those austere and simple habits which they once possessed. The families of Aryan origin made a point, however, of preserving the purity of their blood, and were unwilling to form alliances with the subjugated natives. Convinced of the superiority of the Aryan race, these families constituted an aristocratic caste; and, considering the smallness of their numbers as compared with the subject people, they made it their object to become predominant, not only in intelligence and bravery, but also numerically. With this view, the superior caste adopted polygamy, and it was, in fact, no rare thing to find in Assyria persons of noble race surrounded by a hundred children or more. But this means of increase impaired rather than strengthened the prestige of the dominant superior race. In fact, the Semitic maidens were beautiful, and many of them entered the harems of the Assyrian nobles; so that after some generations, the Aryan and Semitic blood were considerably interfused. The Aryas possess an exalted genius. With a poetic taste they combine a passionate devotion to the study of natural phenomena. They are brave, and ambitious for power; but they have only a moderate aptitude for the practice of the plastic arts. The Semites, on the other hand, inclined to simple ideas, contemplative, adventurous, and independent, have a special aptitude for all that is connected with calculation. They are commercial as a race, and industrious individually; for they do not readily form combinations with a view to a collective undertaking; they are, it must also be observed, not artists, and have a kind of contempt for those who devote themselves to a manual art. The alliance of the two races, however, always produces the elements which are most favorable to the development of the plastic arts.

Epergos began to communicate his observations on this head to his companion Doxius, who had come with the Egyptians into Assyria, and settled in this country. Epergos, who had seen the buildings erected by the Aryas, from the time they quitted the cradle of their race till their settlement in Media, had assured himself that these works were far from having attained the value, in point of art, of those raised by the Egyptians, or even the yellow race of the far East, during the same lapse of time. He had also seen the buildings of the Semites on reaching the banks of the Tigris, and during a journey he had made on the shores of the inland sea. He perceived, therefore, that the dwellings of the men of this race did not vary during the course of many centuries, and had no pretensions to art. But since the influence of the Egyptians had made itself felt in Assyria, and the mixture of the two races, Aryan and Semitic, was being effected by the force of circumstances, the buildings began to attain a rare perfection, and to be enriched with sculptures and paintings; the luxury of their dwellings was daily increasing.

Doxius was listening to his companion's remarks and allowing him to go on, appearing to be thinking of something else.

Epergos continued thus: "Whence I should conclude that if the Egyptians have special aptitudes for the arts, it is because they are the product of a mixture of Aryan and Semitic blood." Doxius looked at him sulkily. "And," continued Epergos, unmoved by this expression of disapproval, "did we not see in Egypt men and women of a fine complexion, ruddy cheeks, and chestnut hair, thus distinguishing them from the majority of their compatriots, whose skin is of a dingy and slightly copper-colored hue, and whose hair is black as ebony? Observe that these exceptions belonged to the higher caste." Doxius shrugged his shoulders. "A strange thing," resumed Epergos, smiling at his companion's gesture; "these Aryas readily change their opinions; they are as variable as the waves, incessantly in quest of novelties, and tenacious in their desires; nevertheless, when left to themselves,

they build to-day as they did yesterday, faithful to the traditions bequeathed by their ancestors in regard to what concerns their domestic habits. The Semites, on the other hand, have no regard for progress, they do not expect it either from their own efforts, or from the lapse of time; external things affect them but little, and in the buildings they erect for their convenience, they seek neither improvement nor change; but when these races are mingled, the race that issues from the fusion is possessed by a passion for luxury, its houses are decorated, and contribute to all the pleasures, and even the refinements, of life. Whence does this arise? Who, I wonder, causes these mysterious results?"

"Foolish thou hast been, foolish thou art, and foolish thou wilt always be," replied Doxius. "Thou speakest of races of men as if there were different races among men. Some are black, others white, others copper-colored; what has been the cause of these differences? Climate, the sun, perhaps deterioration. I make no distinction between men, except that of wise and unwise. The wise are those who, like my friends the Egyptians, hold fast for ages to the good and serviceable which they have discovered, and interdict fools from changing anything in it. The unwise are those who, incessantly changing, restless, and agitated, abandon the good to seek for the better, and to fall into the worse. And thou fanciest that by mingling what thou considerest as different elements, such or such a result inevitably follows? What folly! what blasphemy! Nations that are governed by wise men maintain themselves in purity and tranquility, whatever be the color of their skin. Those who allow themselves to be guided by thoughtless spirits, and who, with their eyes always fixed on the hazy horizon, do not see what is just at their feet, are wretched, and advance only from one form of ruin to another. It is therefore to be wished that thou mayest never be called to govern mankind!"

"Canst thou never discuss a question without using this strong language? Answer my questions, or rather come and see this royal villa which thousands of workmen are just completing here, and say if thou dost not perceive in it the result of a prodigious effort, and at the same time a mixture of dissimilar elements, contrived, nevertheless, in a way which betokens artistic power—something which recalls neither the Egyptian palaces nor the modest Median dwellings, though related to both."

"I shall perceive that the inhabitants of this country have profited by the instructions given them by the Egyptians."

"No, it is something different: but come!"

The companions soon reached a wide square platform, surmounted by buildings which did not present a symmetrical appearance, but whose lofty walls were pierced by arched gateways. Epergos was acquainted with the architect of the royal villa, to which the workmen were giving the finishing strokes. This architect, anxious no doubt to secure the approbation of the two strangers, offered to show them every part of this splendid dwelling.

"This platform, which forms the basis of the royal vil'a" (said the architect, while they were ascending the flight of steps on the south), "and which rises to a height of more than twenty cubits above the banks of the river, is built entirely of unburnt bricks; its facing only is made of stone, from the mountains that separate Assyria from Media. Each of its sides measures three hundred and forty cubits. You see here at AA' the inclined planes which enable chariots to be driven even to the doors."

"But," remarked Epergos, "why this platform?"

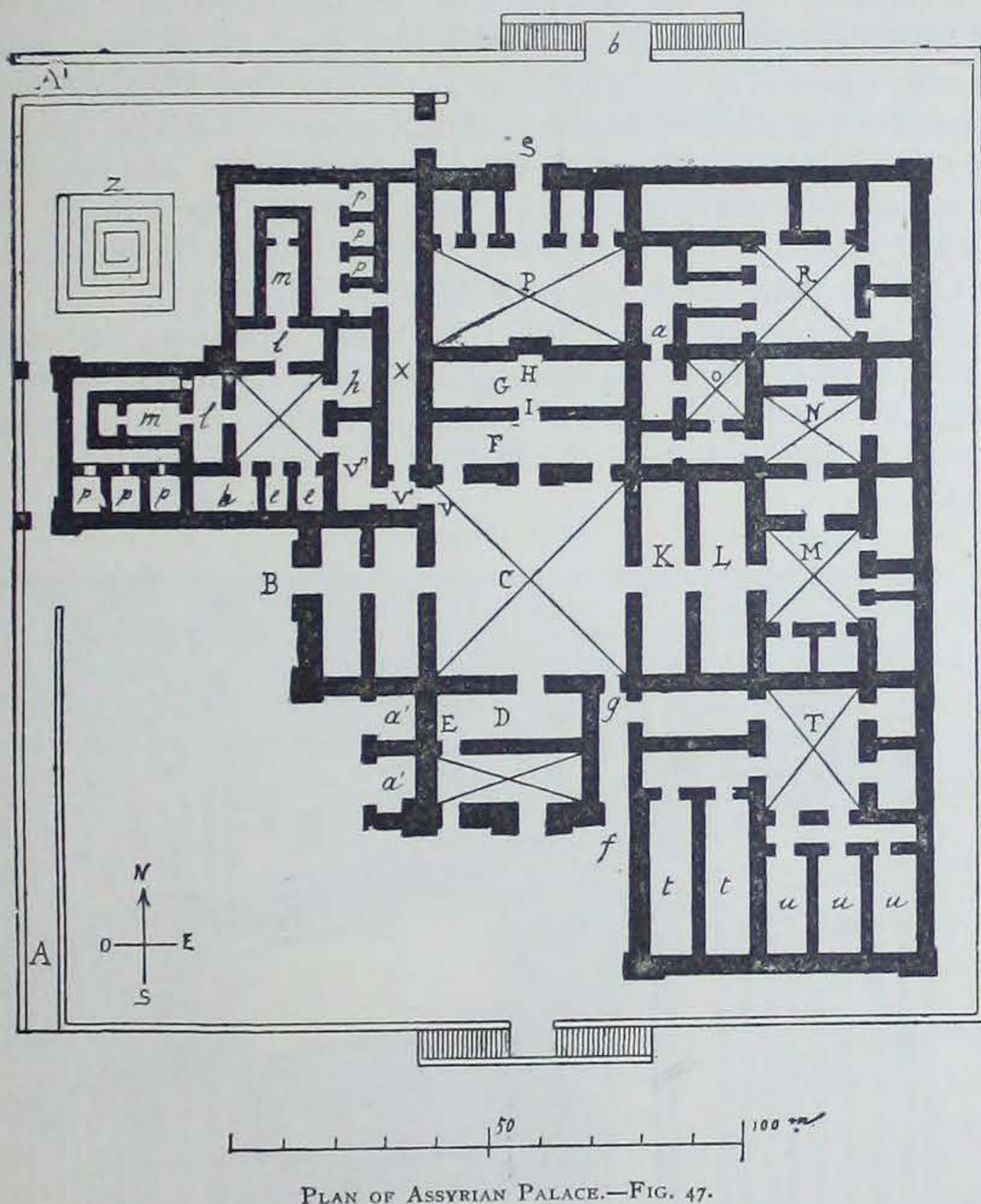
"Because it is the custom of men of noble race to build their dwellings on elevated places; it may well be imagined, therefore, that the king insists upon his palaces being placed in a commanding situation. As the country is flat, the nobles raise hills of clay to build their houses upon."

"How is it that this enormous mass of clay has not sunk under the weight of the buildings it supports?"

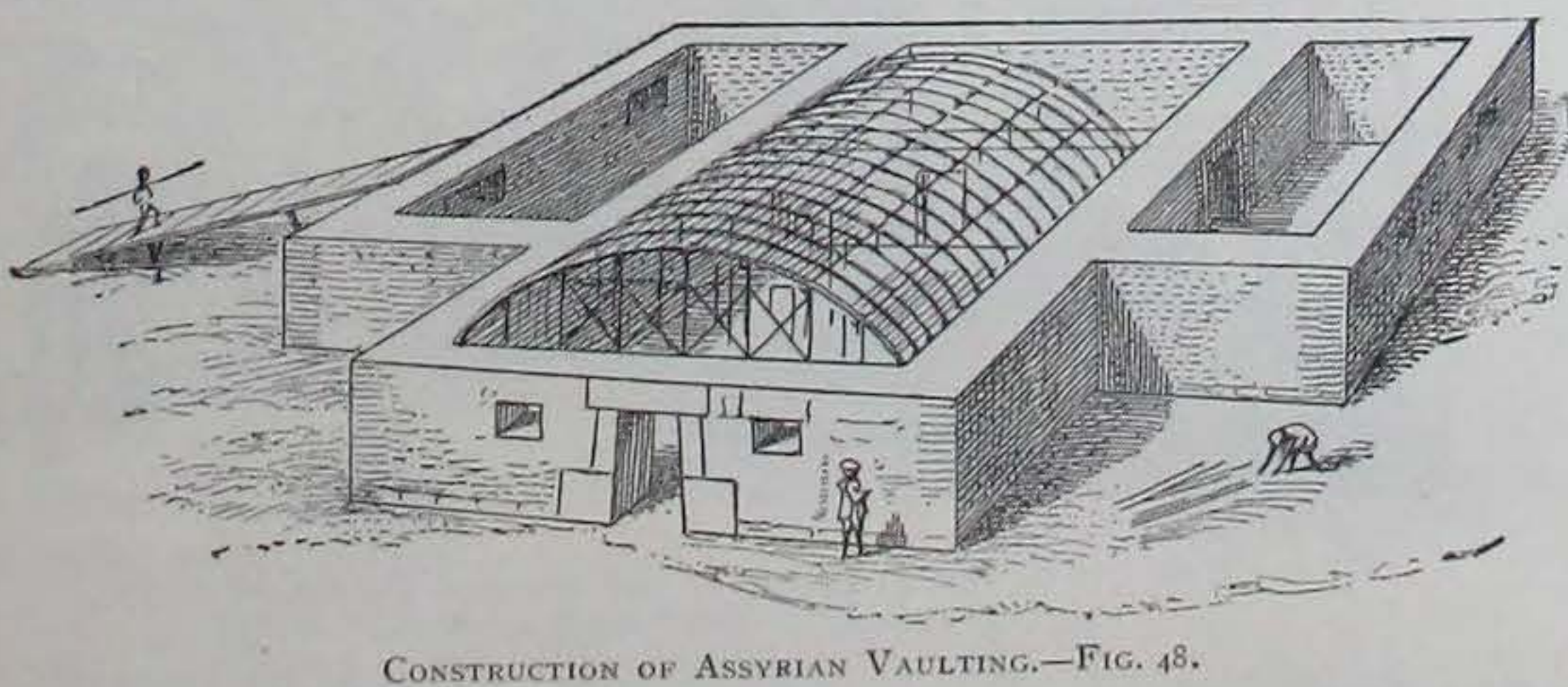
"This is our method of proceeding:—There is, as you are aware, abundance of clay in the plain, and it is found even below the bed of the rivers. To irrigate the land, and to secure its fertility, we dig a great number of canals which establish a communication between the two rivers. It is the clay taken from these canals that serves for buildings, so that the erection of a vast palace is a benefit to the country, for it necessitates the digging of a canal. While some of the

workmen get clay out of the excavations, others are ready to receive, and carefully beat it in large basins; then, being approved by the royal surveyors, this material is thrown into flat, square moulds, and beaten and compressed in these boxes; bricks are thus obtained which are dried in the sun.

"A few hours are sufficient for this drying, since it is undesirable that the bricks should lose all their moisture; for if they did so they would break in being used. When they have attained the proper condition, the bricklayers lay them, carefully crossing the joints, and slightly wetting the subjacent bed, to make the new bed adhere thoroughly. Thus they obtain a structure which experiences neither settling nor rending, for as this clay is kneaded and the bricks are



jointed, the mass is homogeneous. You observe, however, that the walls and the platforms are faced with large stones, which form a kind of box containing the bricks. Moreover, part of these bricks are burned to form aqueducts, which circulate under the platform, and for arches or piers which require great solidity; they are sometimes even glazed. You see some of these glazed bricks around and above the southern portals. But we will not linger over these details; we shall have leisure to examine them later on. The persons who come in chariots leave their vehicles in the covered places which you see at *dd*, for the king alone has the privilege of entering the interior courts

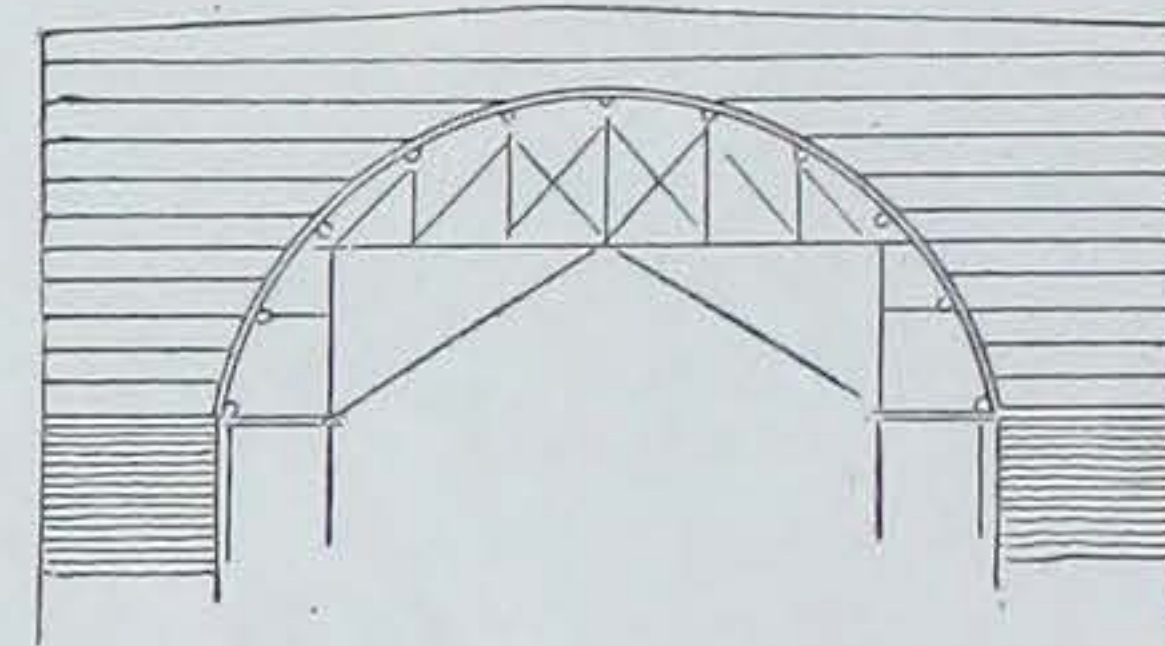


in a chariot. Let us proceed to the principal gate at *B*, for that on the south is only a secondary entrance, as I shall explain to you."

"Allow me," said Epergos, "to admire the exterior of this portal, which is crowned by an arch, a thing which I have never seen else-

where. It surprises me strangely. Who, then, taught you this method of building?"

"Necessity. Forests do not abound here as in Media; it is extremely difficult to convey wood hither; besides heat makes timber quickly perish when it is in contact with clay; moreover, timber coverings, even when overlaid with earth—the plan adopted in some regions to the north—do not afford a sufficiently cool temperature within. We are obliged, therefore, to do without wood, and to build entirely with clay. It was only by gradual means that our predecessors came to invent this vaulting. Seeing that beams, placed horizontally on the tops of the walls, bent under the weight of the earth forming the roofing, and were destroyed by the numerous insects that infested them, the builders of former times first conceived the idea of forming with the canes, which abound on the river banks, arches whose curvature was kept fixed by other canes placed below, vertically, horizontally, and diagonally (figure 48). Thus they composed a substantial piece of wicker work of large dimensions. On this wicker framework they placed lighter canes lengthwise; then a first horizontal layer of soft clay, following the form of the arch as it rose, was rammed on the walls. It was allowed to dry for one day. When it had hardened, a second layer of clay was placed on it, still

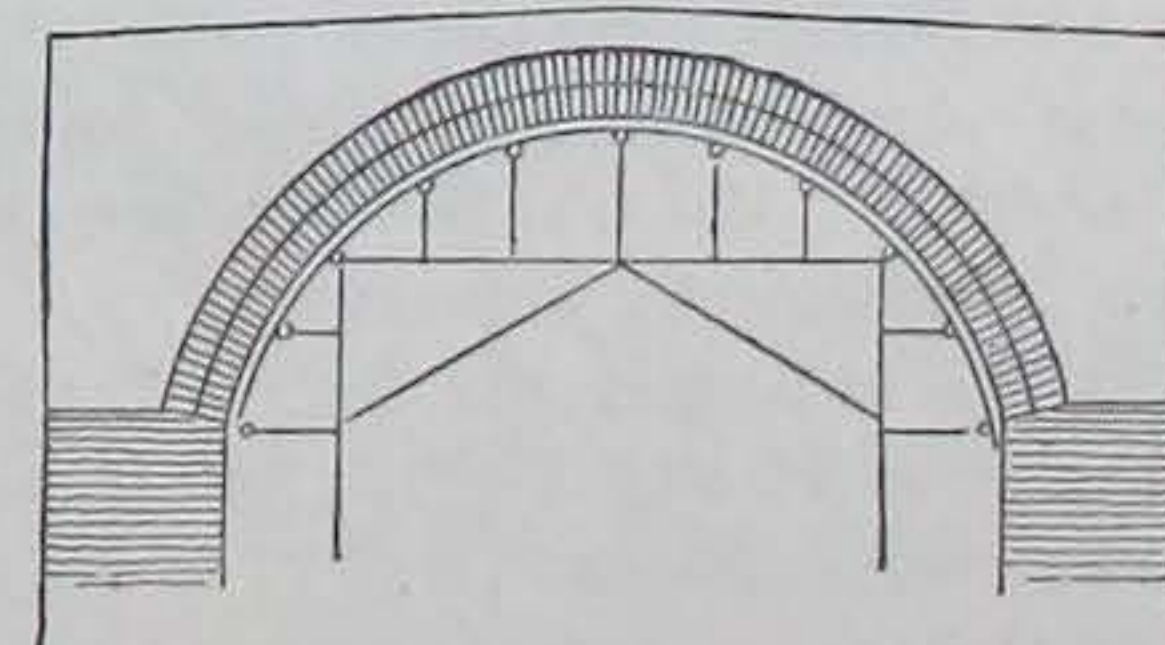


CENTERING WITH VAULTING IN HORIZONTAL LAYERS.—FIG. 49.

following the form of the centre as it rose; and thus, proceeding by horizontal layers, to which, when laid, they allowed time to dry, the arched wicker framework gradually became completely covered with clay. As each of these layers had been deposited horizontally, the entire series presented the section (figure 49); and the builders removed all the vertical, horizontal, and diagonal canes, leaving only those which had given the clay its curvature. There remained then a series of rods, showing which they dared not remove from under the vault, believing them necessary to its support. But in the process of drying, these canes soon ceased to adhere to the clay, and it became evident that they were useless; so they took them away.

"Since each layer of clay must be dried before the following one was laid, these vaults took a long time to build. Every other day, moreover, a sufficient quantity of clay must be tempered for ramming the new layer. Sometimes this clay was moistened too much, sometimes too little. Delay and even danger was the result, because the layers when too wet would crack and risk the fall of the work. Moreover, when they were near the summit of the vault, the portions of clay along the curves being very thin, would dry much more rapidly than those laid on the haunches of the vaults. It was necessary to keep these thin parts moist. All this required an excessive degree of care, and success was never certain. They were, however, already beginning to mould bricks as we mould them now.

"It was then that a man, held in great respect on account of his knowledge, and whom we call Kabu, proposed to build on the curved reeds in the same way as walls are built, that is to say, laying the



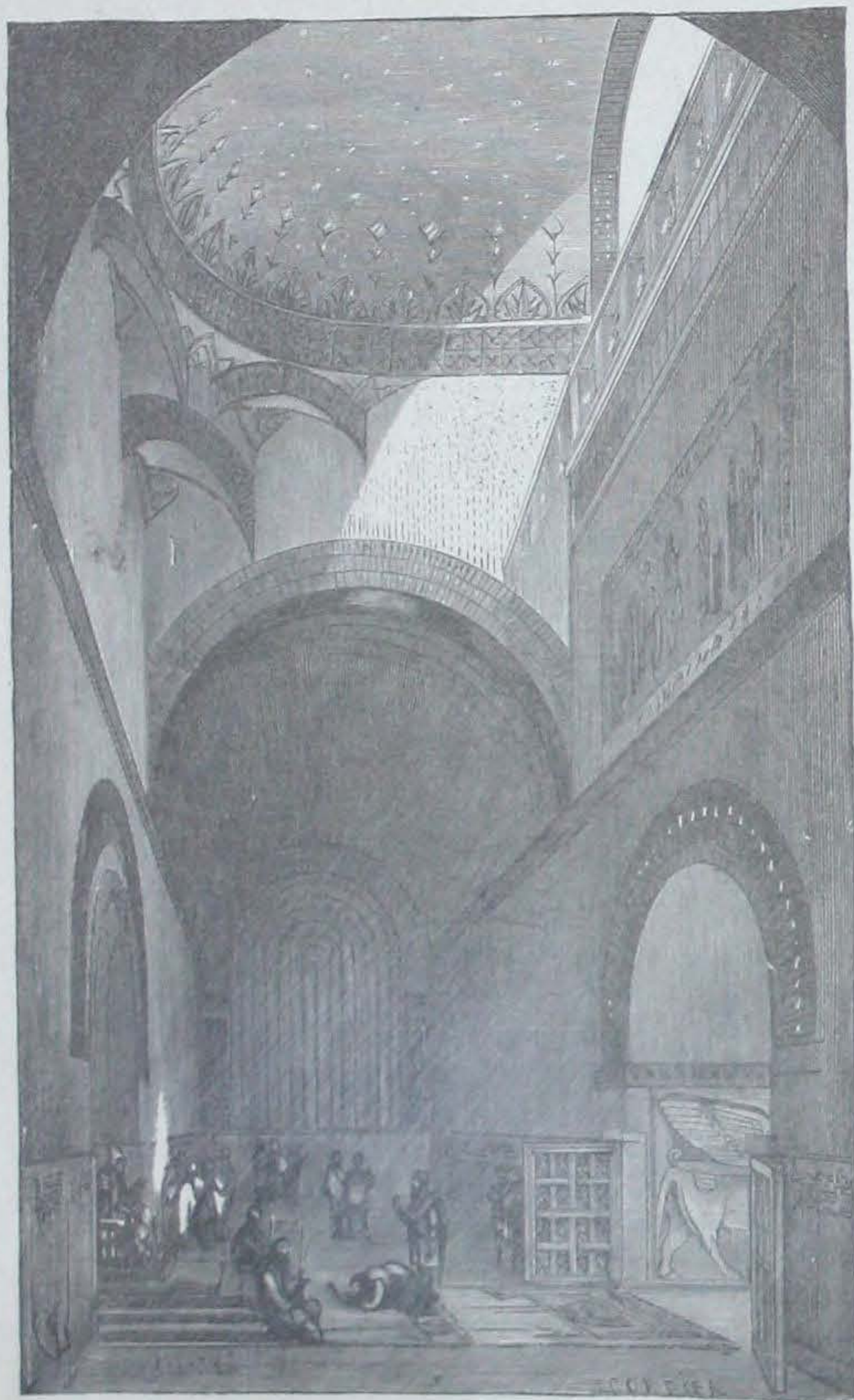
VAULTING MADE WITH VOUSOIRS.—FIG. 50.

bricks as you see here (figure 50); consequently, to pass from the vertical direction in which the wall was built to the curved direction of the arch, without leaving any angle between the two directions;

in a word, to carry the arches round by means of a complete semi-circle. Thus the wall would be continued, so to speak, curving over more and more.

"It appears that Kabu had much difficulty in getting his idea adopted; the elder men pronounced him crazed, asserting that a wall ceased to be able to stand the moment it deviated from the vertical.

. . . But Kabu constructed a small arch according to his system.



INTERIOR OF A HALL IN THE ASSYRIAN PALACE.—FIG. 51.

You smile," said the architect to Epergos; "perhaps this account seems to you rather trivial."

"By no means," replied Epergos; "it interests me, and I like to hear you relate it; and I will tell you the sequel of it," continued he, looking askance at his companion Doxius, who was evidently ill at ease. "Kabu's model of a vault did not persuade the elders; they told him that though his principle might hold good in the small scale, such a construction executed on a large scale would infallibly break down. Then Kabu had wedge-shaped bricks moulded of the size of ordinary bricks; and placing them together dry, without the interposition of wetted clay, he demonstrated by experiment that these bricks would hold together of themselves.

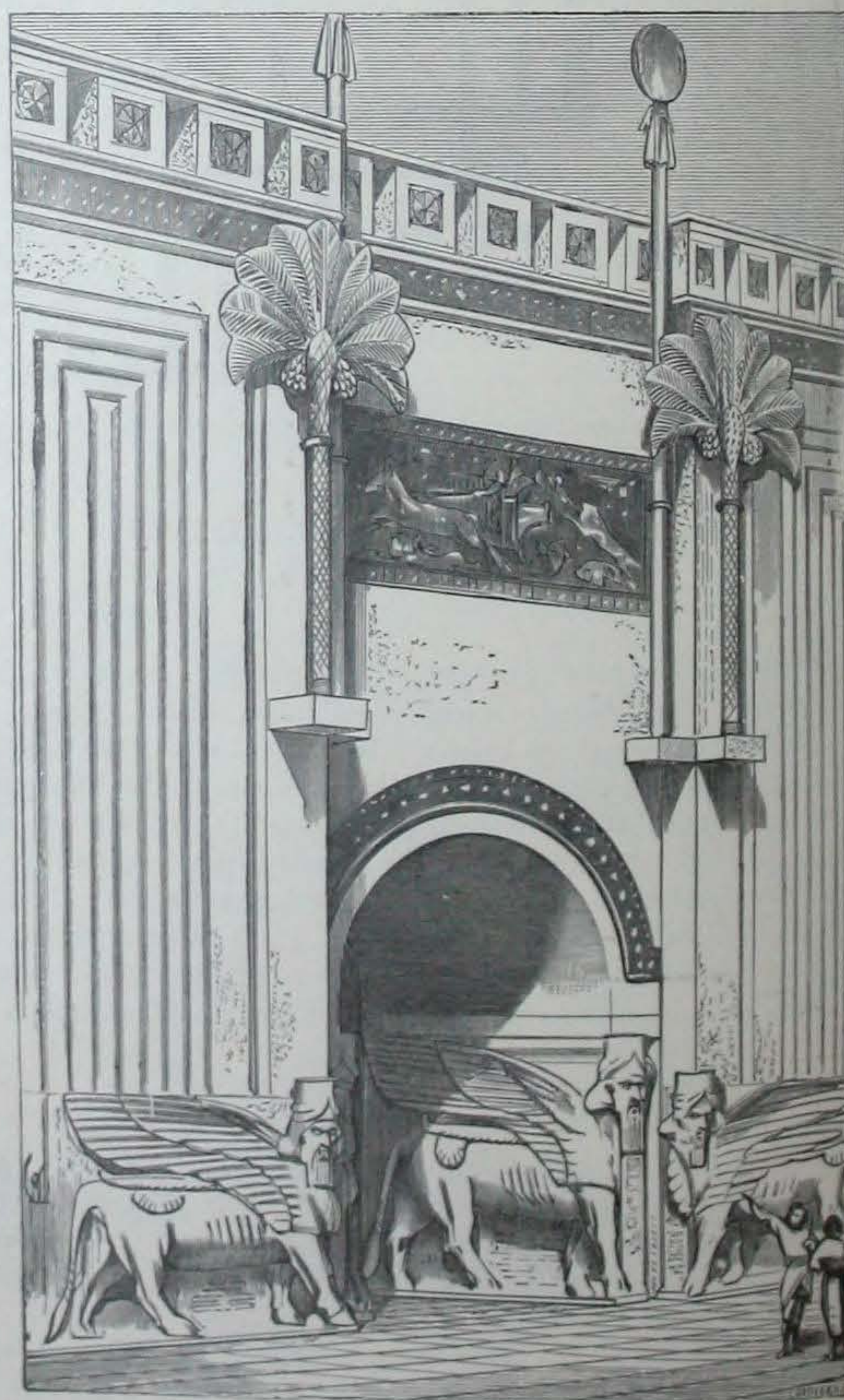
"Zulul, the most obstinately prejudiced among the elders, demanded nothing short of Kabu's banishment, since he was contravening the laws of nature by sorceries. . . Thou seest that I know the story in its minutest details. . . Kabu was, in fact, obliged to quit the shores of the Tigris; but it seems that his ideas have made their way nevertheless . . . in spite of Zulul; and I congratulate you on the fact.

"Now, if thou wilt continue thy explanation of these marvels, we are attentive listeners."

"When they began to make bricks specially adapted for the construction of arches, according to Kabu's suggestion," resumed the architect, "it was not difficult to burn them and glaze their faces, as

they burn and glaze pottery. It is, then, with these baked and glazed bricks that we form the fronts of the archways which display their brilliant colors in the sunshine, the string-courses and tablets and the surbases of the halls, and even the pavement of rooms. But let us go in. This principal gate B (see figure 47) whose jambs are ornamented with winged bulls cut in stone, gives admission to a first and a second vestibule, where the servants remain who accompany the persons summoned to the king's presence. Here is the greater court C, belonging to the suite of apartments specially reserved for the king—the seraglio. On the south side opens a hall, in front of which is a second long court, and a thick wall in which is a large doorway and a second smaller one. In this hall and court assemble the parties to causes submitted to the decision of the king. The litigants of high birth enter by the great door, the rest by the small one; but neither can be introduced into the hall D till they have given their names to the officer posted at the small door F. At the hour fixed for the trials, all cross the court, and betake themselves to the halls on the north, E and G. The king is seated on a throne placed at H, and the litigants, as they are successively called on, pass through the door I. You see how the second hall G is lighted. A demi-cupola, open to the sky, rests on the vault in the centre of the hall" (figure 51).

"This is certainly very beautiful," said Epergos; "what is thy opinion of it, Doxius? Confess that the old Zulul was quite in the wrong in wishing to prohibit this poor Kabu from constructing arches; for this is, in truth, a new and ingenious application of that first idea



ENTRANCE OF ONE OF THE BUILDINGS OF THE ASSYRIAN PALACE.—FIG. 52.

"In fact, since they were making arches, it was scarcely more difficult to make cupolas and demi-cupolas. But this one is skilfully managed. Wert thou the first to adopt vaults of this kind?"

"Oh no!" replied the architect. "This kind of structure has long been in use, and they are still more easy to build than the arches. Here these demi-cupolas, opening on the terraces of the palace, have

the advantage of pleasantly illuminating the interior of these halls, while they prevent the sun's rays from being too powerful. Besides, curtains are hung before these openings, and thus the light is subdued, and the air circulates freely. On this side," continued the architect, "there are no passages leading into the buildings on the northern side, and we shall have to go again into the great court."

"Permit me," said Epergos, "to contemplate this doorway of the first hall (figure 52).

"What is the meaning of these winged bulls with human faces, which form the piers of the entrance, and between whose legs long inscriptions are engraved?"

"The inscriptions record the labors of the king; as for the winged bulls, these representations belong to the class of sacred things, and it is forbidden to speak of them."

"Look above at those palm-trees of cedar-wood overlaid with gold plates, and which accompany that enameled painting representing a royal chase, and those poles terminated by disks of gold."

"It is all wonderful; but I see that the walls are very frequently ornamented with large vertical cylinders like trunks of trees put close together."

"Yes, that is a tradition of the first constructions of our ancestors, which were made of trunks of trees placed together; and though we now build with bricks, we have preserved the souvenir of that primitive structure."

"In fact, I remember having seen in Media houses thus built."

"The two halls, κ λ (figure 47) arranged like those you have just seen, and which are assigned to the officers of the royal household, lead to the seraglio, which comprises three courts, m , n , o , and the king's apartments. You will observe that this quarter is entirely shut off, and only communicates with the northeastern buildings by a single door a . These northeast buildings, which have two courts, p and r , are tenanted by the officers attached to the service of the prince, who have their private entrance at the gate s by the stairs b and the ascent for the chariots a' . This quarter is also isolated from the others."

"Now let us pass to the southeast angle."

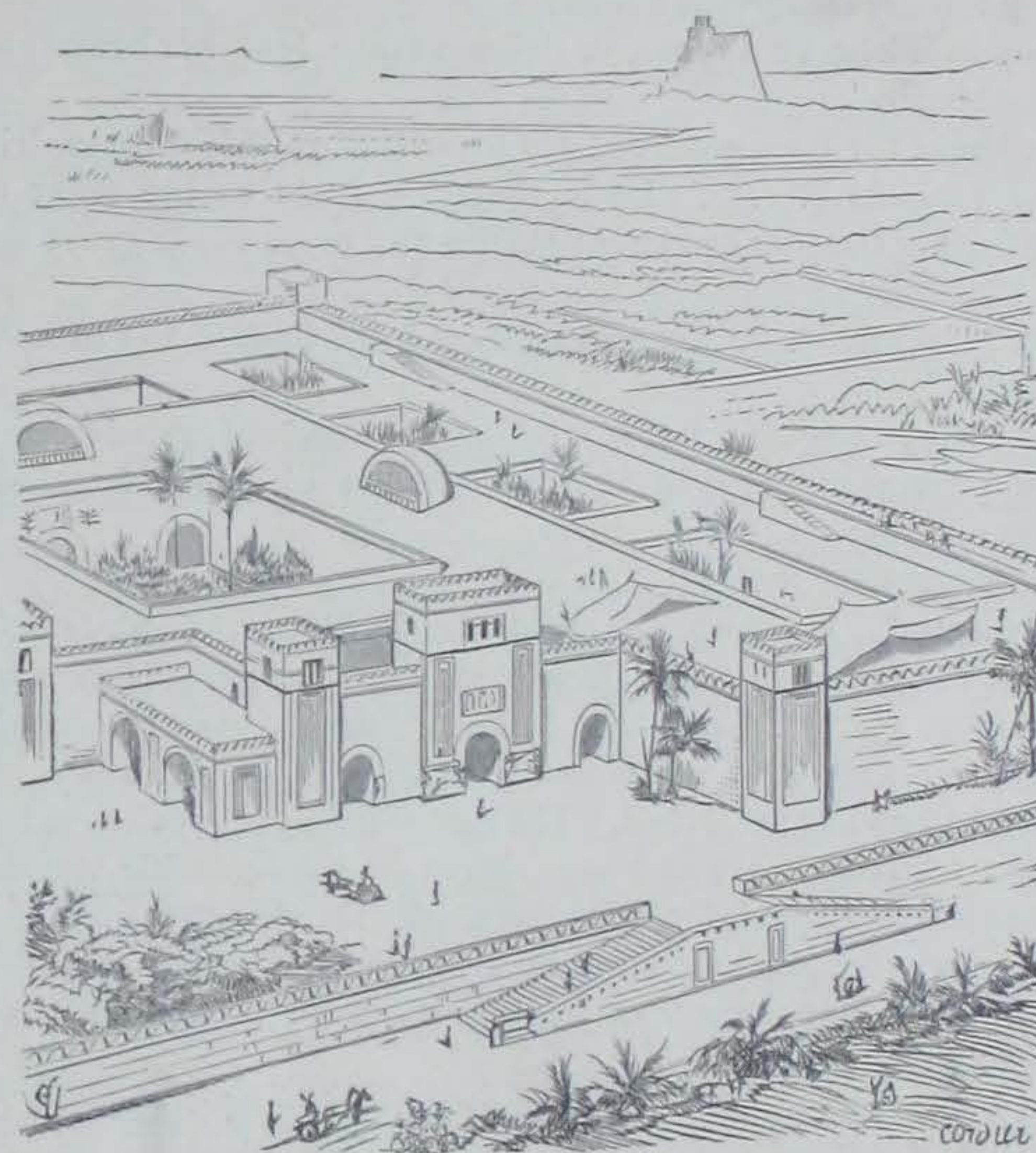
"Observe that the only entrance from the outside is by the door f , and from the court of the seraglio by the door g . The provisions and the kitchens are in this quarter, which has also its court t . The provisions are arranged in the most orderly manner in the storehouses $u u u$. The servants convey the viands to the royal table, passing through the door g , and entering the large halls of the seraglio, where sometimes morning banquets are given to persons of distinction, or in the private apartments."

"All these halls are ceiled with semi-circular vaulting. But this is the most interesting part of the villa, and I am able to show it you as it is not yet occupied. It is the harem, on the northwest angle. The only entrance to this part of the building is by the door v , the little vestibule v' , and the second vestibule v'' . Here at x is a long court, in which the eunuch guards reside. The harem properly so called has its courts, on which open two small rooms $e e$ for the women who have the care of children, two large halls $h h$ reserved for the children, who remain in the harem up to the age of five, two other halls $l l$ in which the women pass their days, and the sacred apartments $m m$ destined for the prince when he resides in his harem. The apartments are separated from the enclosure walls by isolating courts communicating with the lodgings of the eunuchs $p p p p p$.

"Let us go out and visit the observatory placed at the northwest angle of the platform at z . This observatory is 120 feet high, and its base is a square of 70 feet. The ascent to the platform at the top is by inclined planes, whose aggregate length is 820 feet. This observatory, like all the rest, is built of unburnt bricks with a facing of stone at the base, some parts of glazed bricks. Each of the walls of the inclines forming a stage is painted in a different color. The first is black, the second white, the third orange, the fourth blue, the fifth scarlet, the sixth is silvered, and the last gilded. See how it shines in the sun. Would you like to go to the top?"

"With pleasure," said Epergos, and he began to climb the slopes at a brisk pace, while Doxius and the architect were ascending more slowly. Figure 53 presents a bird's-eye view of a part of the palace, taken from the southwest angle.

The view from the higher platform of the observatory was charming. On the horizon to the southeast the city of the Ninevites could be discerned, already of considerable extent, and with lofty walls, whose centre was occupied by palaces. The Tigris—divided into several branches, from between which emerged islands covered with a rich vegetation, and with country houses exhibiting whitened walls and terraces—was bearing along on its rapid current numerous circular rafts supported by leathern bags filled with air, each navigated by some half-dozen men who were thus bringing down provisions of all sorts to the city. Beyond the river, a chain of hills followed the



VIEW OF ASSYRIAN PALACE.—FIG. 53.

course of its shores, their barren summits contrasting with the expanse of dark verdure which covered the lower slopes. On the east extended an immense plain, streaked in every part by canals whose waters shone in the sun like silver plates, and from whose bosom might be seen rising at intervals artificial mounds surmounted by buildings—the mansions of influential personages surrounded by well-kept gardens. On the north, the winding course of the Tigris lost itself amid belts of blue hills which rose in succession towards an horizon of limpid clearness.

Epergos, supporting his chin on his hand, and leaning on the upper balustrade, seemed lost in contemplation.

"Well!" said the architect touching his arm; "is not this a fine situation for observing the heavens?"

"And the earth too," replied Epergos. "But tell me what is that large square enclosure which I see laid out there, in the plain, the side of which seems to me a furlong or thereabouts, and whose area is quite bare of vegetation?"

"It is the enclosure destined for the royal chase."

"What am I to understand by that?"

"At the present day, if the lion, formerly common in these plains, is to be hunted, you must go far northwards or westwards. The king cannot spare time for such distant expeditions. Servants, trained for the purpose, take large cages and contrive to entrap lions and lionesses in the mountains, without injuring them. These are conveyed to the royal domains; and when the sovereign wishes to indulge in the pastime of the chase, he surrounds this enclosure with soldiers, protected by large bucklers and armed with strong spears, and the cages are then wheeled into it. The king then mounts a chariot, with his charioteer at his side, and accompanied by two hunters selected by him. The cages are then opened; the soldiers utter loud shouts; the wild beasts, bewildered by the uproar, run in every direction; the king pursues them, and from his chariot transfixes them with arrows. Sometimes the beasts, infuriated by their wounds, throw themselves on the horses or on the wheels, then the two assistants, armed with lances, slay them."

"But this sport seems to me somewhat dangerous."

"All depends on the charioteer; if he is skilful, he can elude the attack of the beasts, and afford his master an opportunity for shooting them. The present king takes great delight in this sport, and is very skilful at it. He sometimes kills a dozen lions and lionesses in a single evening. Accordingly, great favors are bestowed by the king upon a charioteer of experience and agility. But in the event of an accident—if the chariot is arrested in its course by some furious lion fastening on the horse's flanks,—if the king is imperiled; oh, then, woe to the driver!"

"Why? what happens to him?"

"They nail him to a cross, or drive a stake into his breast, and so leave him to die."

"Are these tortures reserved for unskilful or unfortunate drivers?"

"By no means . . . Look there! a little to the right of this hunting-field. Do you see those stakes and crosses,—a great number of them?"

"Yes, certainly . . . and I fancy I see bodies too attached to these stakes."

"Yes; they are the bodies of eight hundred rebels from the northern provinces brought here before the king, for he alone can order their execution."

"And he has done so?"

"Certainly! Do you see also those flights of birds of prey hovering over the gibbets?" Epergos turned away. "Oh, those are only the most guilty!" continued the architect, "ten thousand have been kept as slaves, and are working at the canals, the walls, making bricks, and carrying materials. How could we get workmen to build these vast edifices, if we had not slaves in considerable numbers at our command? Especially as these works shorten the lives of many of them; for working in the mud during the hot season is unhealthy work. Since this palace was begun, we have lost more than two thousand workmen."

"But if a long peace deprived your sovereign of the means of furnishing his domains with a sufficient supply of slave labor, what would you do?"

"This has been the case sometimes; and then emissaries are sent into the northern provinces, in the direction of Media and beyond, whose mission it is to excite the population of these districts—which are never easy under the yoke—to revolt. Provoked by these agents, they refuse to pay the tributes, or intercept the messages, or massacre some of the royal delegates. The king sends an army, the country is pillaged, and the whole population carried away into slavery: in this way our building works are supplied with labor; and the crucifixion of a few, who are regarded as the most guilty, in presence of the assembled slaves, renders those who are spared submissive and docile as girls, and they work without murmuring."

"These are expensive palaces," whispered Epergos to Doxius; and addressing the architect, he said: "But the fear of torture does not make sculptors and painters."

"Oh, as to fine work of that kind, it is different! We have corporations of sculptors and painters subjected to severe rules; these artisans are instructed in schools taught by masters under sacerdotal direction; for nothing must be done which is not in accordance with religion. These men are free, and live together in quarters assigned them; and what they gain goes into the fund of the corporation, which is charged with the maintenance of each of its members."

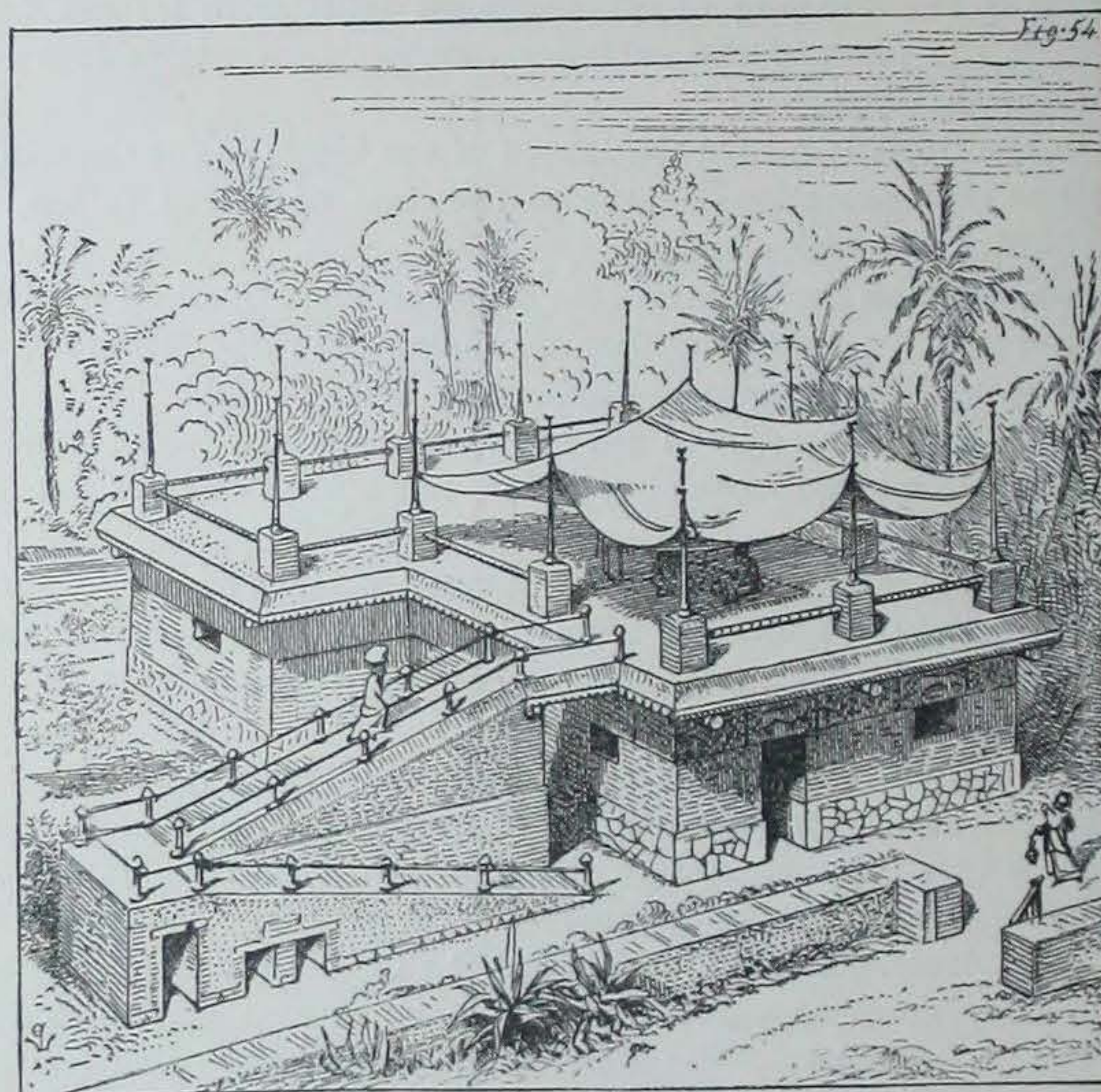
Just then a person presented himself on the platform, and said something to the architect.

"I must go down," said the latter to the visitors; "a message has been brought me from the court; but you need not hurry. Here," said he, presenting them with a small plate of lead on which certain characters were marked, "this will enable you to inspect the palace without me; we shall meet again after sunset."

For several days, Epergos and Doxius were engaged in traveling along the shores of the Tigris. Everywhere they saw well-cultivated, because well-irrigated fields. The roads exhibited the most perfect order; and along them might be seen vehicles continually passing, or herds of cattle quietly moving. Numerous canals served the purpose of irrigation, and were also in constant use for navigation; this means of transport being the least laborious in that country, where for a great part of the year the heat is most oppressive. The houses

scattered over the country were all built on nearly the same model. The better class had vaulted roofs; the less pretentious were covered in with palm-trunks and canes, upon which earth, beaten and plastered, formed terraces where awnings were stretched out to form sleeping places by night, and for shade in the daytime. These terraces were reached by inclines of unburnt bricks.

Figure 54 represents one of these habitations. The basements are generally made of stone (irregularly laid), to withstand the floods



ASSYRIAN HOUSE.—FIG. 54.

which sometimes inundate the plain. On these are erected walls of unburnt bricks, with lintels of wood over the doors and windows. Then large tree-trunks are laid across, on the tops of the walls, and others smaller, the contrary way; next canes and clay, well-kneaded and covered with lime plaster; for the Ninevites have the art of converting certain lime stones into lime by burning; and mixing this lime with fine river sand, they make very fine and excellent plaster. They also procure bitumen in the mountains to the west, which they use as a cement between the baked bricks, under pavements, and also upon the terraces. This bitumen is of great service to them, and they use it largely.

When the heat is so intense as to become stifling even in the interiors of the dwellings, the well-to-do inhabitants have tents of thick white woolen stuffs placed on the terraces, and servants are kept continually watering these tents outside. Thus the sun, by causing this water to evaporate, rapidly produces an agreeable coolness beneath the tents.

"It is evident," said Doxius, "that in these countries the enjoyment of life depends on being born among the dominant and wealthy part of the community. Never have I seen a people among whom the condition of the poorer classes was more pitiable."

"Must we not except Egypt?" replied Epergos.

"No, indeed; in Egypt there is a settled order of things; the several classes have their privileges, their rights and their obligations; they are separated by strict rules; but the meanest of these classes is treated paternally, if we compare the treatment they receive with that which all here have to undergo who are not of noble race, or favored by the great or by the king."

"Yes, I agree with thee that the condition of this people is miserable; that the dominant class is tyrannical, harsh, and unfeeling;—that it shamefully abuses its power. But observe, Doxius, a great work is going on here. This is a vast laboratory, where the civilizations of the future are being prepared; thy friends the Egyptians may be superior to these Assyrians with their large eyes, thick eyebrows, bushy beards, stout limbs, and wide shoulders; but Progress takes no account of the former, because they have never been in contact with the world, except incidentally; they are fixed, and will remain fixed, on the banks of the Nile. It is quite otherwise with the

inhabitants of these countries; they swallow up other peoples, and perhaps will be swallowed up in their turn; but they will have taught many things to mankind.



CHAPTER XV.

THE PELASGI.

THE stream from the east had continued to spread emigrants through Media; but, dammed up, so to speak, by the numerous populations settled in that country, it could no longer spread southwards; and while leaving small settlements of pure Aryan race on the banks of the Araxes, and as far as the southern slopes of the Caucasus, it spread farther and farther along the shores of the Euxine, occupied the fertile countries which later on took the name of Armenia, Paphlagonia, and Bithynia, crossed the Bosphorus, and founded colonies in Thrace, Macedonia, and Thessaly. The isles of the Ægean sea were peopled by them, as also the Peloponnesus.

These settlements had already long existed at the time when Epergos and Doxius were visiting the palace of the Ninevite king.

On the other hand, the Aryan peoples, mingled with those of the Semitic race, had spread along a line parallel to the north of the Taurus chain, and were occupying Phrygia, Caria, Lycia, Rhodes and Crete, or at least the countries thus designated at a later period. Nomadic or rather migratory in their habits, they continued for a long time without fixed settlements; they did not live in wagons like the Scythians, but dwelt temporarily in huts built amid the forests which covered all these countries; and possessed herds of cattle and swine, and flocks of sheep and geese. They already cultivated the ground in the plains but in a primitive way, and it was not till later on that they sowed seed in ground prepared by the plough. The habitations of these Pelasgi consisted of a low circular wall, formed of

the smoke issued from the top of the cones. A circular enclosure, likewise constructed of large stones, surrounded each of these huts.

Having lived among the mountains ever since they quitted the plateaus of the Indus, and having formed but a slight acquaintance with the already highly civilized peoples settled in the south of Media, they had preserved their rude and simple character. Like their ancestors, they had vehicles drawn by oxen or horses, lived together in tribes, and preserved the religious beliefs of the Aryas, slightly modified during their migrations.

When they settled on the west of the Ægean sea, the Pelasgi found in these regions barbarian aborigines, who lived on acorns and milk-food. Always on horseback, these first inhabitants drove their great herds of cattle before them with long pointed sticks.

Given to pillage, difficult to capture, and inhabiting only caves or forest jungles, they obliged the new-comers for many years to defend themselves against their aggressions; and these struggles left such an indelible remembrance in the minds of the Pelasgi, that they continued to portray on their public monuments those primitive contests with these beings—half-horse, half-man—who had disputed the soil with them.

The Pelasgian tribes prospered, however; they cultivated wheat and the vine, extracted oil from the olive, and devoted themselves to agricultural pursuits. Those inhabiting the coast and the islands had built vessels, were engaged in commerce, and practiced piracy. Relations were thus established between the populations of the opposite shores of the Ægean;—relations which were not always pacific, but which none the less tended, in many cases, to bring about the fusion of the two peoples.

Most of the inhabitants of the Asiatic coast were more nearly akin to the Semitic than the Aryan race; they already possessed arts comparatively advanced; worked metals; and were skilful in the art of building large vessels and towns. The Pelasgi of Thessaly and those of the shores of Peloponnesus, were obliged to concert measures for resisting the incursions of the peoples settled on the Asiatic coast. The tribes formed federations, and the most powerful among them, or those whose chiefs were most intelligent, soon acquired a marked preponderance.

In imitation of the piratical tribes who ravaged their coasts, they built towns and citadels.

The countries inhabited by the Northern Pelasgi, intersected by high steep hills and ravines, were peculiarly rich in various kinds of stone suitable for erecting durable buildings. Accordingly, the Pelasgi did not fail to make abundant use of these materials, avoiding tedious workmanship however; for they still had only bronze tools, and were therefore unable to give shapes of delicacy to these materials. As for traditions of art, they had none; and the little instruction they had been able to gather was limited to faint recollections derived from the Medes of the north during their sojourn south of the Caucasus, and from the articles they received from the Carians and Lycians in exchange for the products of their soil.

These Pelasgian villages, however, despite the extreme simplicity of their buildings, preserved a character of strength and rude grandeur, in perfect accordance with the unpolished manners and primitive habits of the people.

Taking advantage of naturally defended positions, such as promontories and acclivities, they surrounded these positions with thick walls built of large unsquared blocks of stone, irregularly laid according to the method of the Tyrrhenians; thus was formed the citadel, which enclosed the treasure-house, one or more temples, and the habitations of the chiefs of the tribes.

Around this citadel were grouped the dwellings, which were themselves surrounded by an enclosure. The leading men among them who had not residences in the citadel, built their houses upon some commanding point of difficult access.

As the huts of the shepherd and the tiller of the ground were circular, so the dwelling of the rich preserved this time-hallowed form, at least in one of its parts; for at that time even the temples were built on a circular plan. But the dwellings of the rich were built almost entirely of stone,—occasionally with a wooden portico.

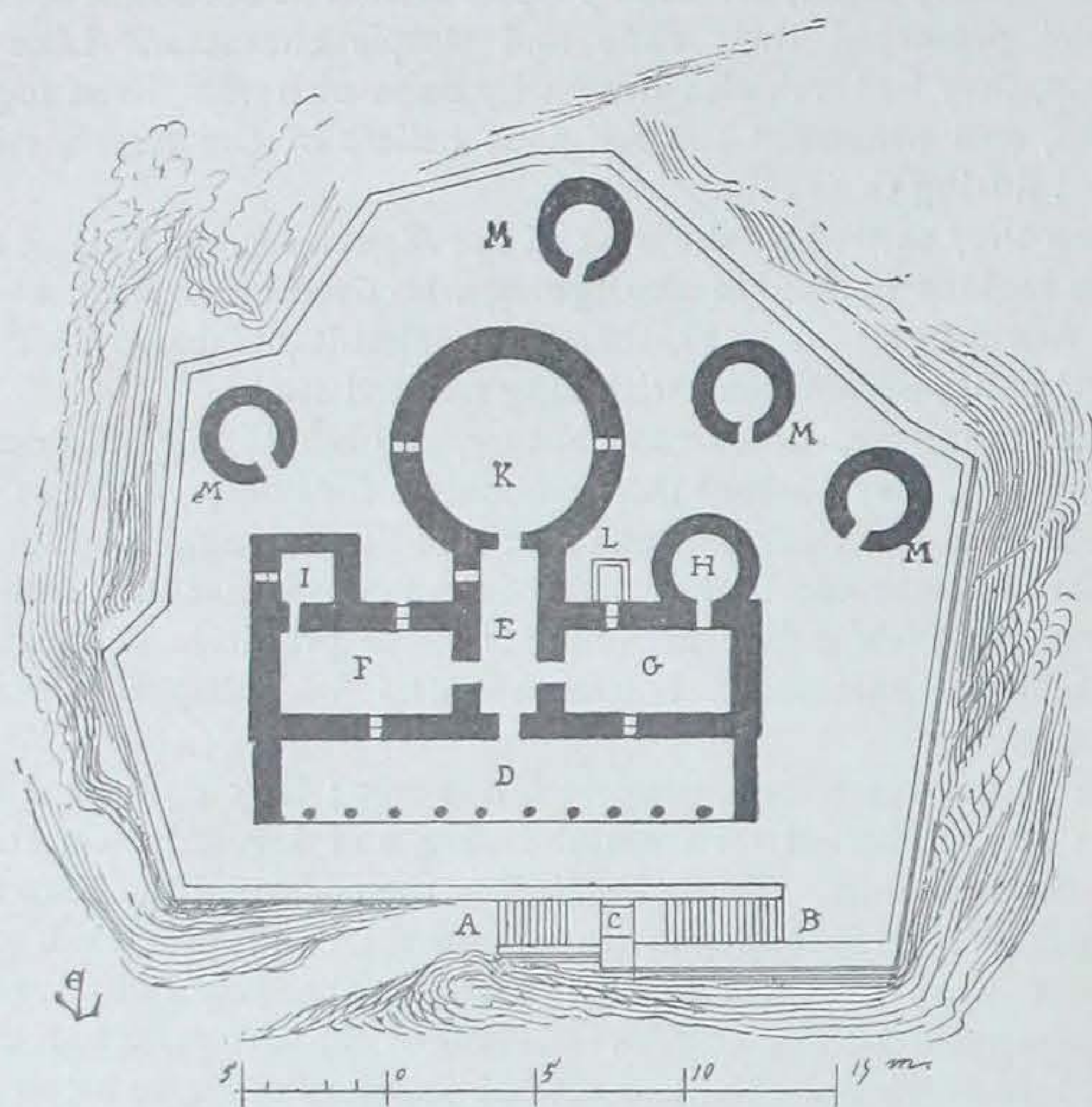
Figure 56 gives the plan of one of the most spacious and costly of their houses. Built on the summit of a rocky eminence, it is sur-



HOUSE OF PELASGIAN PEASANT.—FIG. 55.

large stones, on which was erected a cone of branches of trees covered with reeds or twigs (figure 55). The fire was made in the middle, and

rounded by a wall which crowns this leveled summit following all its natural sinuosities. A flight of steps A B gives access to the platform; but at c a gate shuts off the steps about the middle of the ascent. At D is a portico formed of trunks of trees roughly fashioned, sup-

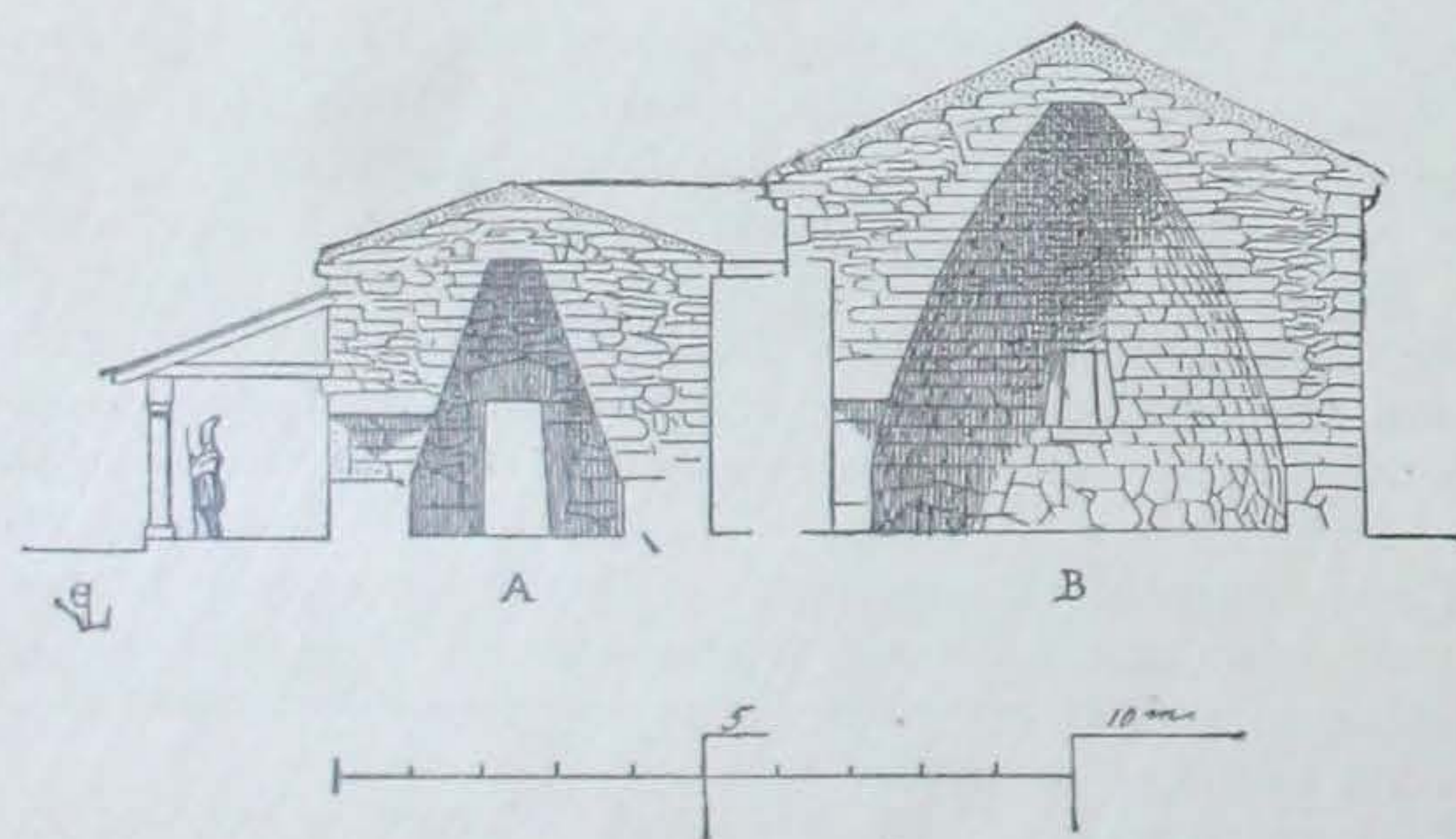


PLAN OF HOUSE OF A PELASGIAN NOBLE.—FIG. 56.

porting a longitudinal beam, on which rests the joists and the roof. A single door gives entrance to the vestibule E, which opens on the right into an apartment G, where the servants and strangers remain—with a kitchen of circular form at H; and on the left to a similar apartment F, which is occupied by the master; and a small chamber I, which is the family treasury.

From the vestibule there is a direct entrance into the circular room K. This is the place for social gatherings, and where meals in common are taken. At L is a cistern collecting and preserving the rain-water. At M are huts for the servants.

The following is the method according to which the Pelasgi construct their dwellings:—



SECTION OF HOUSE OF A PELASGIAN NOBLE.—FIG. 57.

A, figure 57, gives the transverse section of the room G and of the portico: B, the section of the circular hall K.

As the entire edifice is built with large stones, these are lifted to their place by main strength, with the help of inclines formed of stones and earth, which are taken away when all is finished.

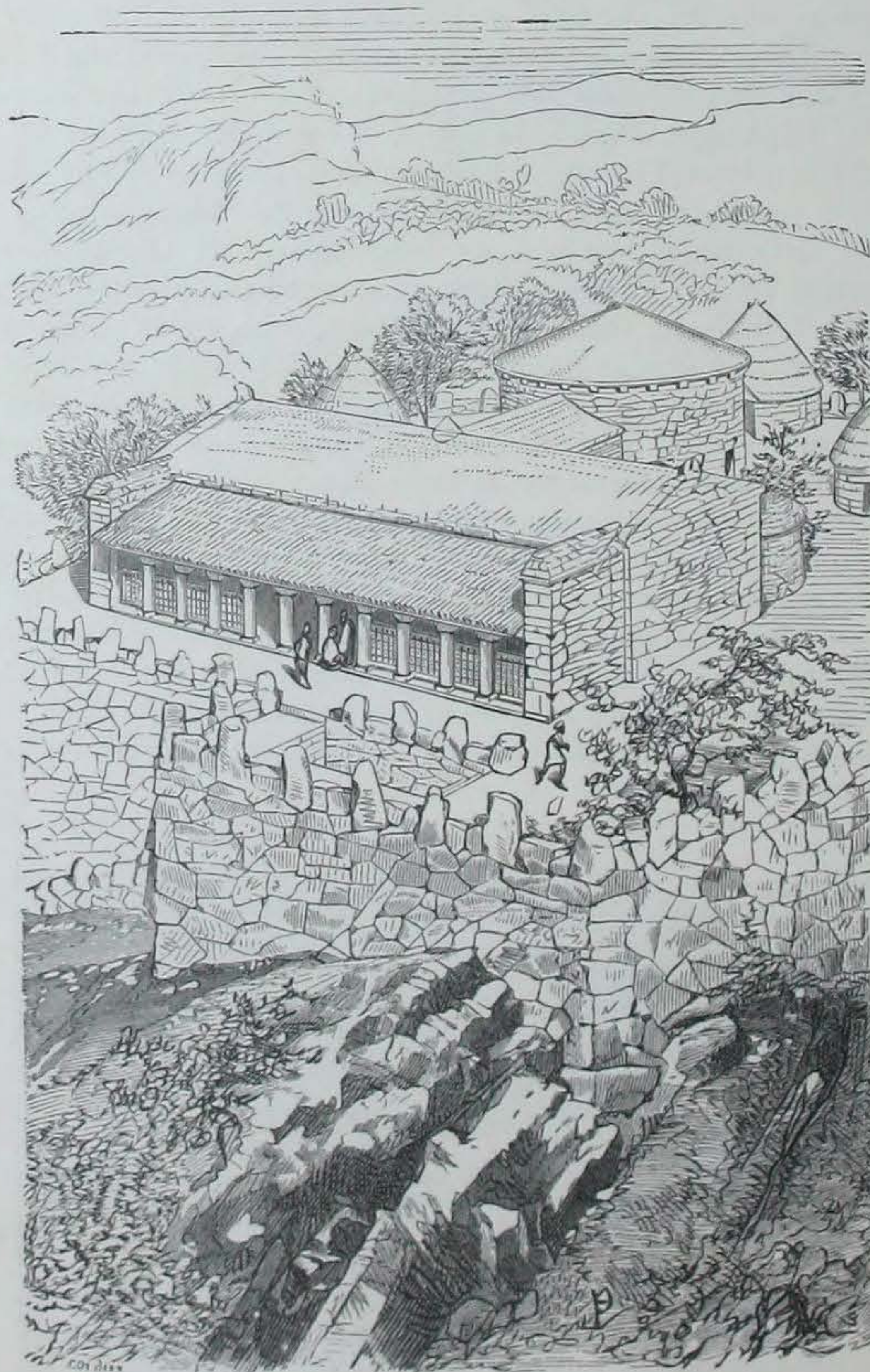
It is, however, for the erection of the basement chiefly that materials of great size are used; when the workmen reach the corbelled-out sloping walls they use lighter stones, and select flat ones. When the structure is complete—care being taken that every stone exactly covers the joints of those beneath—the upper part is plastered over with clay mixed with straw, so as to cover all the stones that present slopes on the exterior.

The Pelasgi assert that these buildings were so designed by their ancestors; but it is certain that they derived their ideas from what

they saw on the shores of Asia—in Caria and Lycia; though in these countries there were two modes of building—one entirely with stone, which seems to belong to the Tyrrhenians, and which much resembles what is shown here; the other with timber, which belongs more particularly to Aryan traditions inherited by the Ionians.

There are, moreover, different versions of the history of the migrations of the peoples to whom the name of Ionians is given, but whose Aryan origin cannot be doubted, though they may have been mixed with Semitic populations at a very early period. We must suppose these Ionians to have passed from Asia into Europe—i.e., the Peloponnesus, and to have been driven out by the Achæans; some would have returned to Asia where they founded colonies; others would have sought refuge on the coast of Elis and in the Archipelago which preserves their name.

But to return to the Pelasgian habitation of which the plan has been given. Figure 58 presents it in perspective, with its escarped enclosure crowned with large, rough stones which form so many merlons, and the openings between them crenellations for defence. On the platform are a few fig and olive-trees, round the huts set apart for the servants. The portico, constructed of wood and covered with reeds and straw, is the place occupied by the family during the

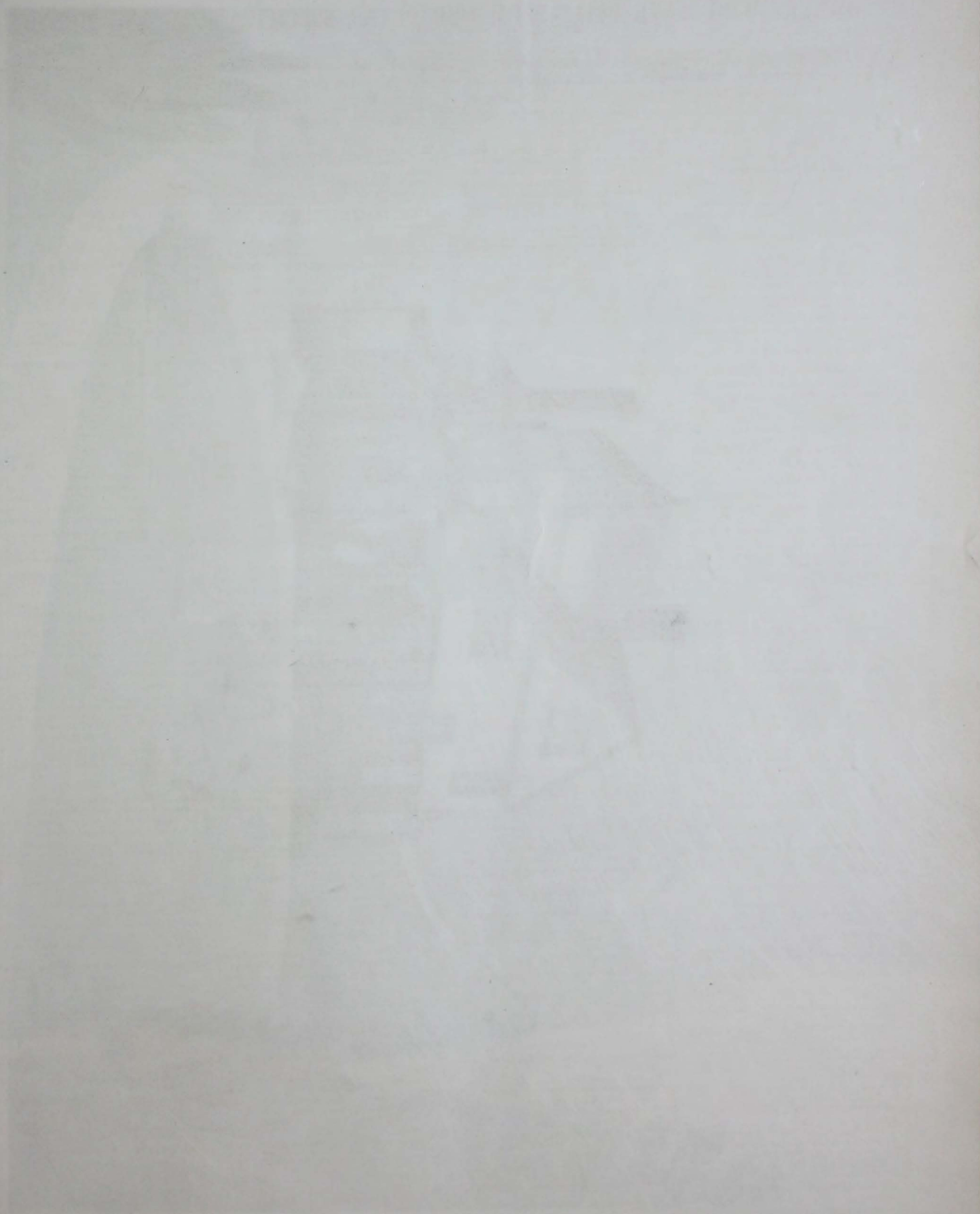


VIEW OF HOUSE OF A PELASGIAN NOBLE.—FIG. 58.

day. The space between the posts is partly closed with wattling. As stated above, these Pelasgi live in tribes more or less powerful, but which tend more and more to unite in federations. Their occupations are divided between the cultivation of the soil, cattle-breeding, and piracy.

They remained, however, in a state of simplicity which contrasted with the progress made by the Ionian populations of Asia. These, being in permanent connection with nations already highly advanced in the arts, were building sumptuous edifices, in which, as we shall presently see, the original traditions and influences of the bordering countries may be said to have been reflected.

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January 1, 1888.

THE CO-OPERATIVE BUILDING PLAN ASSOCIATION, ARCHITECTS, 63 Broadway, N. Y.



DESIGN No. 370. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 370

SIZE OF STRUCTURE: Front, 22 ft. Side, 20 ft.; these figures do not include the verandas.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story (kitchen and bedroom) 9 ft.; Second Story, 8 ft.

MATERIALS: Foundation, wood posts; First Story, beveled siding; Second Story, shingles; Roof, shingles.

COST: \$600, complete.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—An appropriate design for a fishing camp, a shooting lodge, or a summer residence at the seaside.

The living room is open to the roof, which insures its being cool, as the warm air rises and escapes through the windows in the gable end, thus creating a constant draught through the room.

The stairway goes up to a gallery (suspended from the rafters), from which the two upper bedrooms are entered.

The front bedroom (in the tower) has straight walls the full height, while the walls of the rear bedroom are cut off slightly on one side by the slope of the roof.

The fire-place is made a feature: built of brick, with a wood shelf, after a quaint design, it is quite artistic, and yet so simple that an ordinary mechanic can build it.

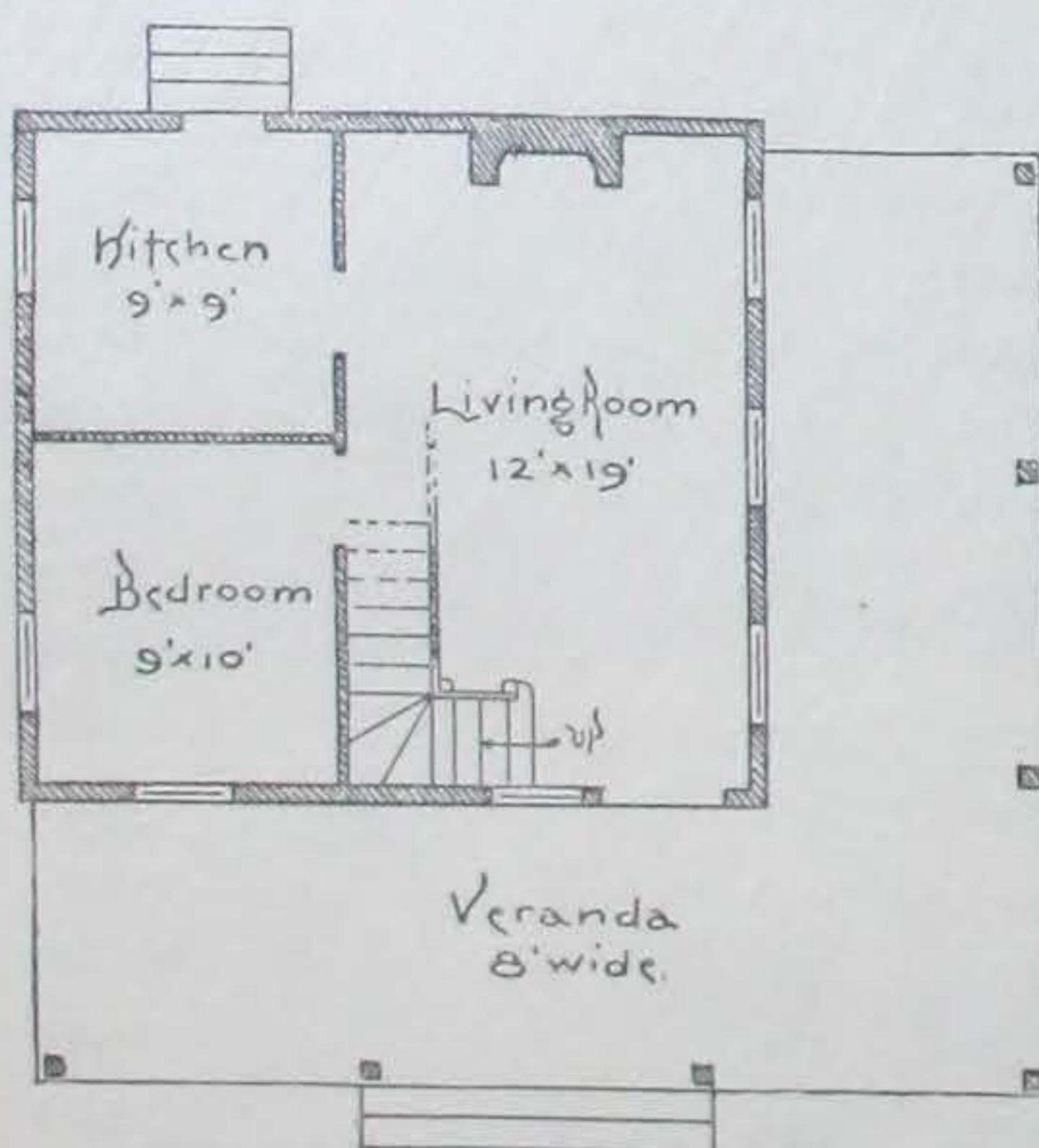
The interior walls are not plastered but are finished with red building paper; the studding and all wood-work is dressed and exposed to view and finished with varnish.

NOTES

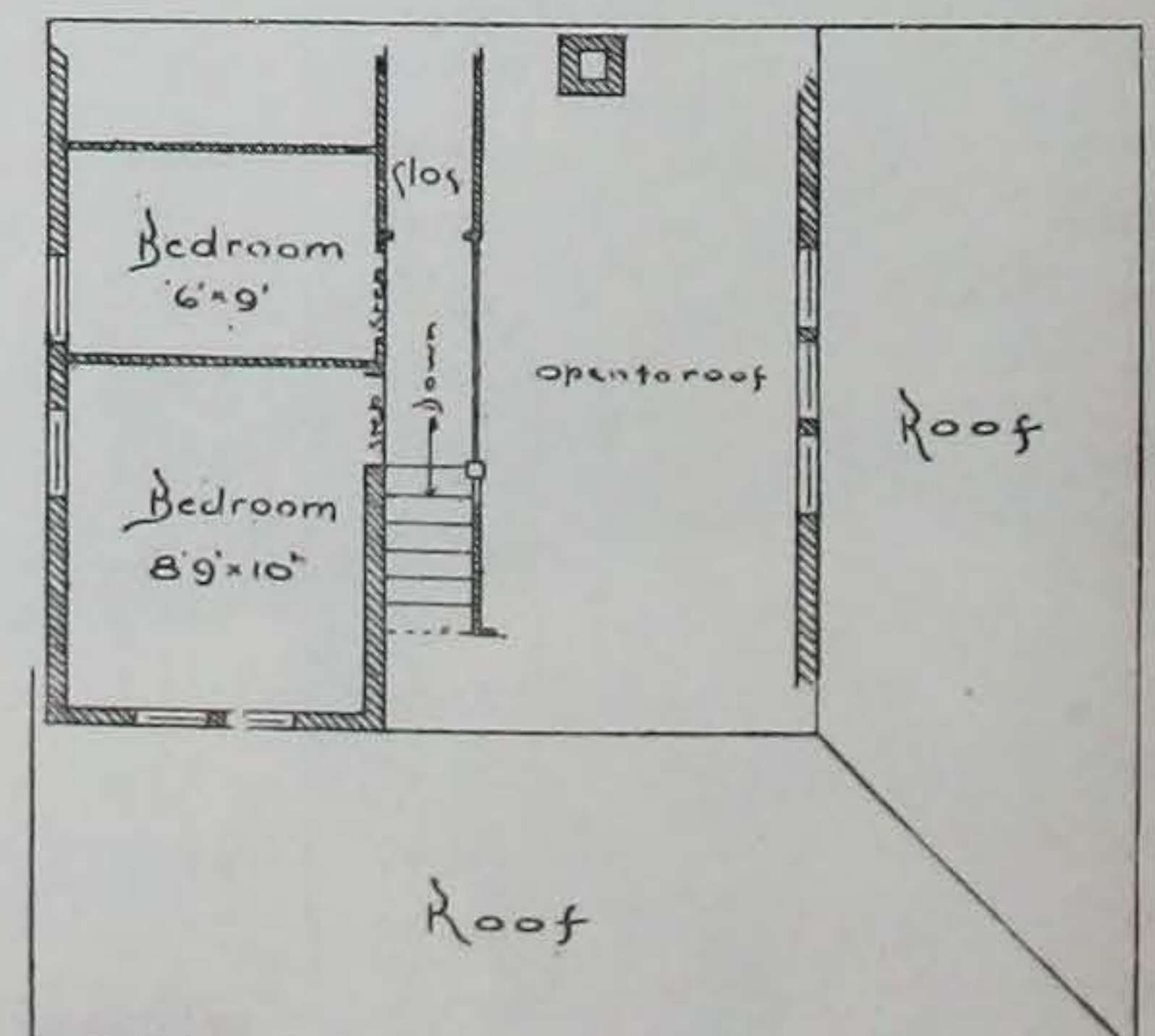
The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

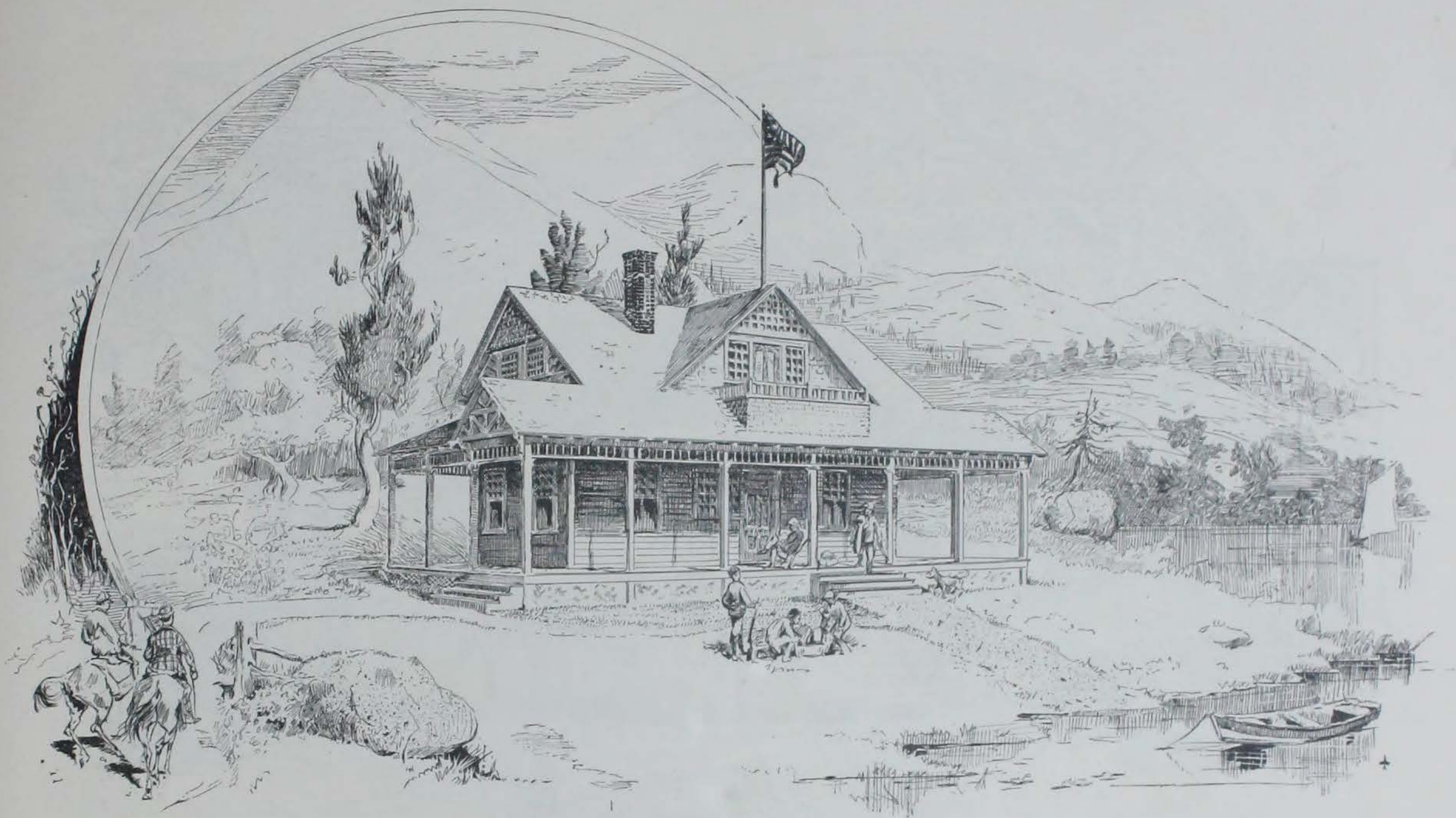
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.



FIRST FLOOR. NO. 370



SECOND FLOOR. NO. 370



DESIGN No. 371. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 371

SIZE OF STRUCTURE: Front, 33 ft. Side, 16 ft.; these figures do not include verandas.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 10 ft.; Second Story, 3 ft. at walls, 9 ft. at centre.

MATERIALS: Foundation, wood posts; First Story, beveled siding; Second Story, beveled siding and shingling; Roof, shingles.

COST: \$800, complete.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

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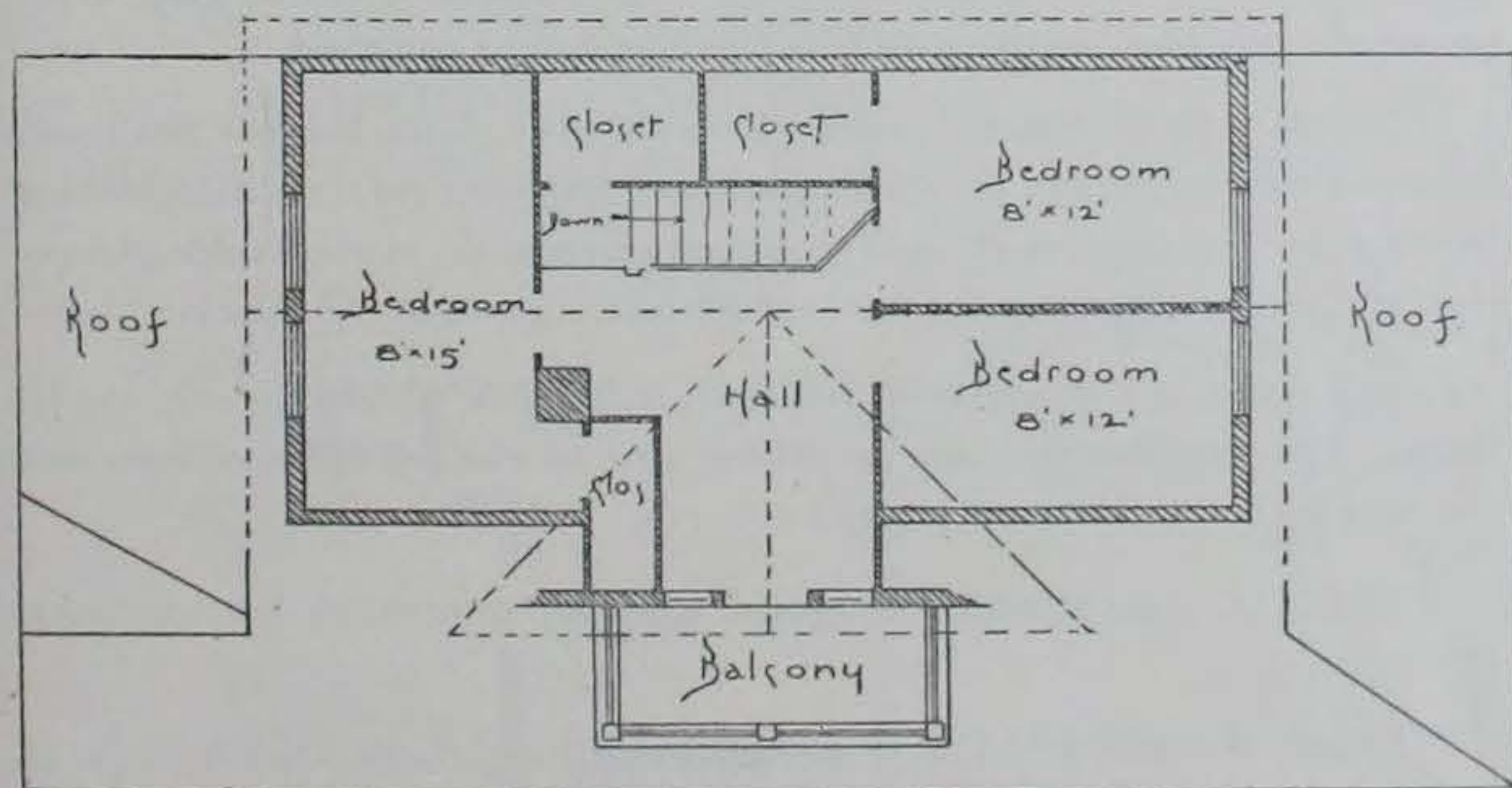
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Designed for a seaside or a mountain cottage; very suitable also for a shooting lodge or "box."

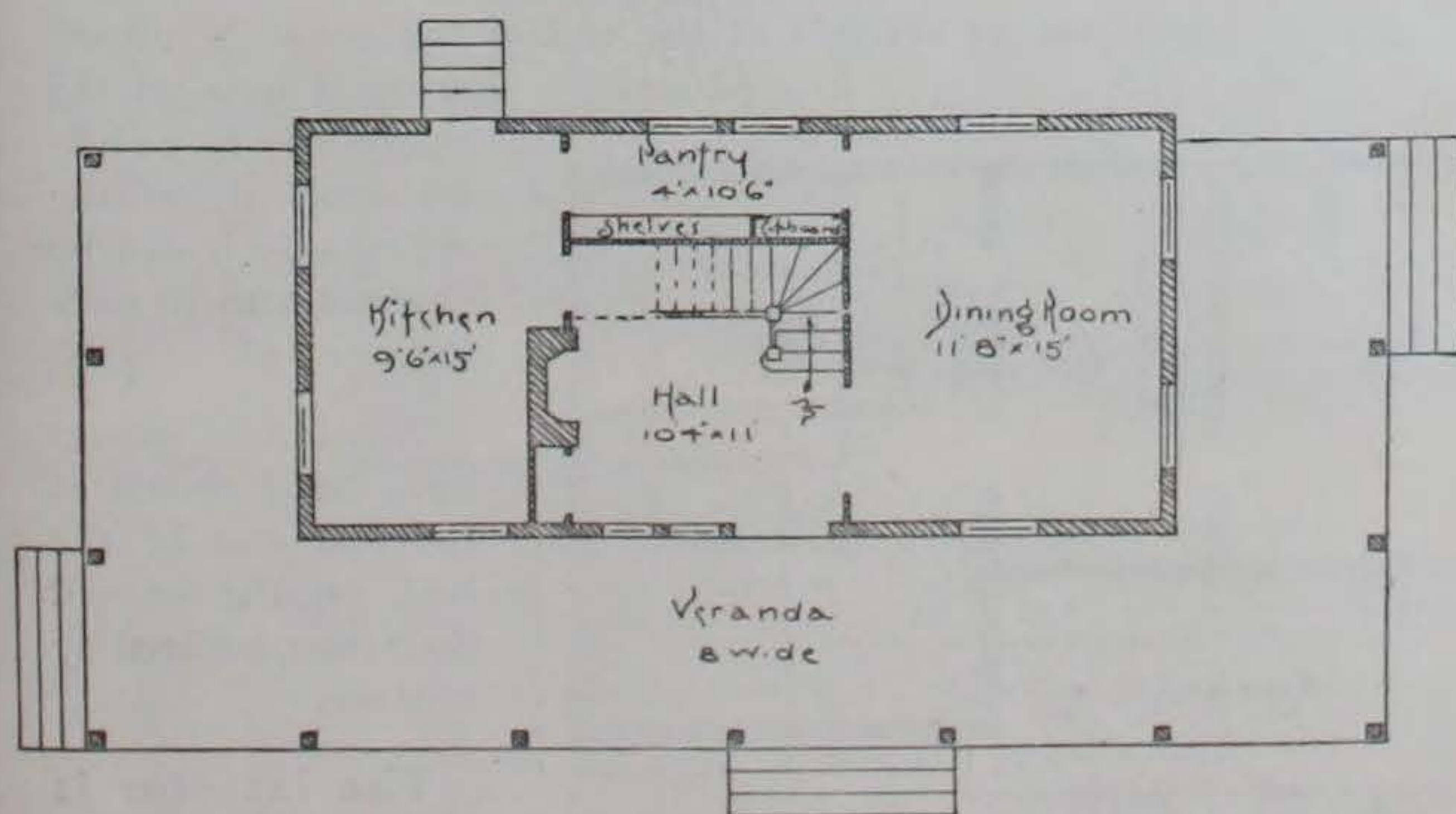
An open fire-place of quaint design in the hall; the same chimney gives a flue for the kitchen.

The hall makes a comfortable sitting-room.

The interior is not plastered; it is finished with heavy red paper and the woodwork of frame is exposed to view and varnished. This finish is very appropriate for a summer cottage, makes a pretty appearance and is inexpensive.



SECOND FLOOR. NO. 371



FIRST FLOOR. NO. 371



DESIGN No. 372. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 372

SIZE OF STRUCTURE: Front, 36 ft. Side, 22 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 9 ft.; Second Story, 8 ft.

MATERIALS: Foundation, brick piers; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$900, complete.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and at different

dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—A good seaside, mountain or Southern cottage.

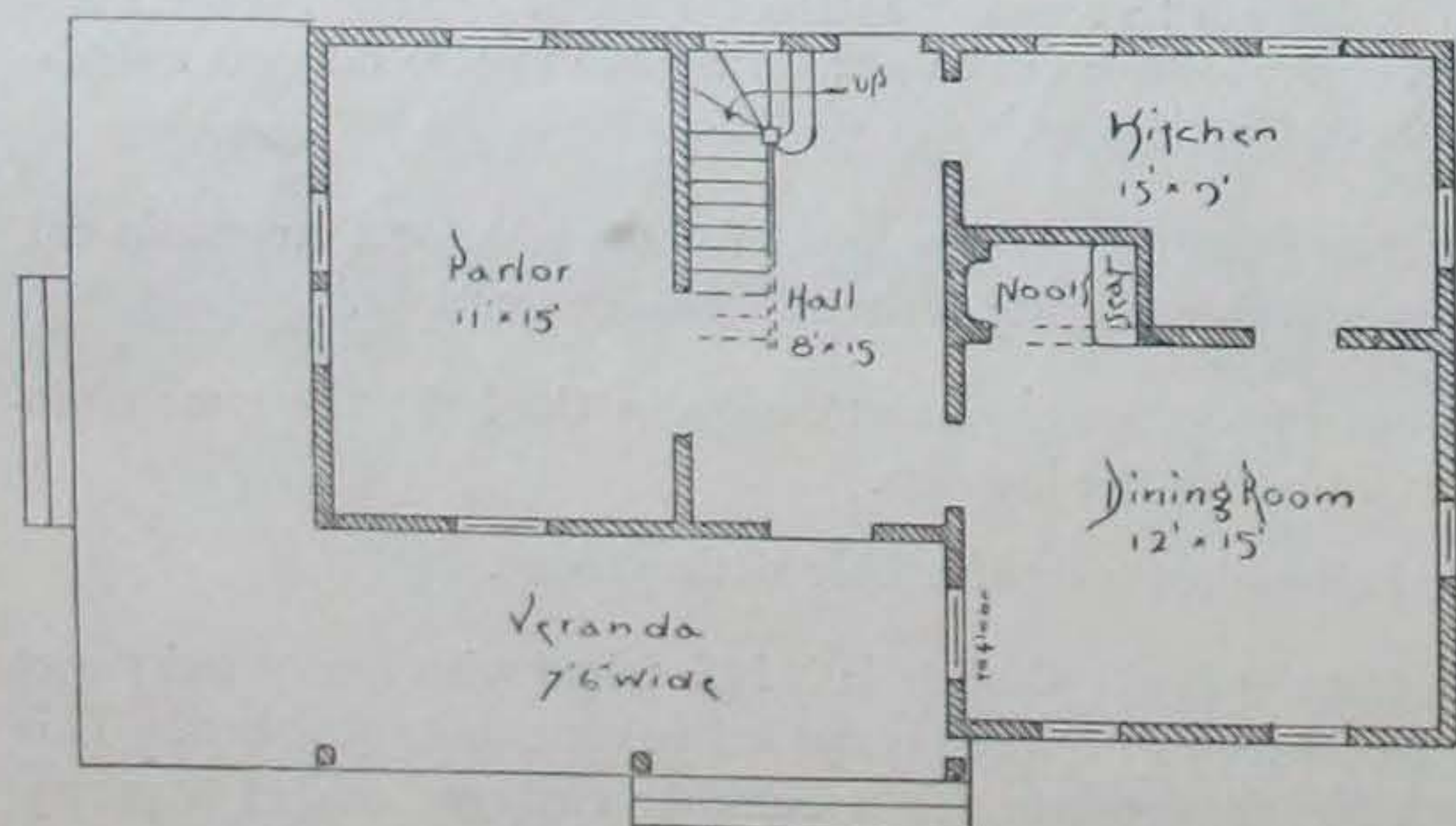
Open fire-place in the nook in dining-room, with a seat opposite it.

The platform or veranda at the end of the house is uncovered;

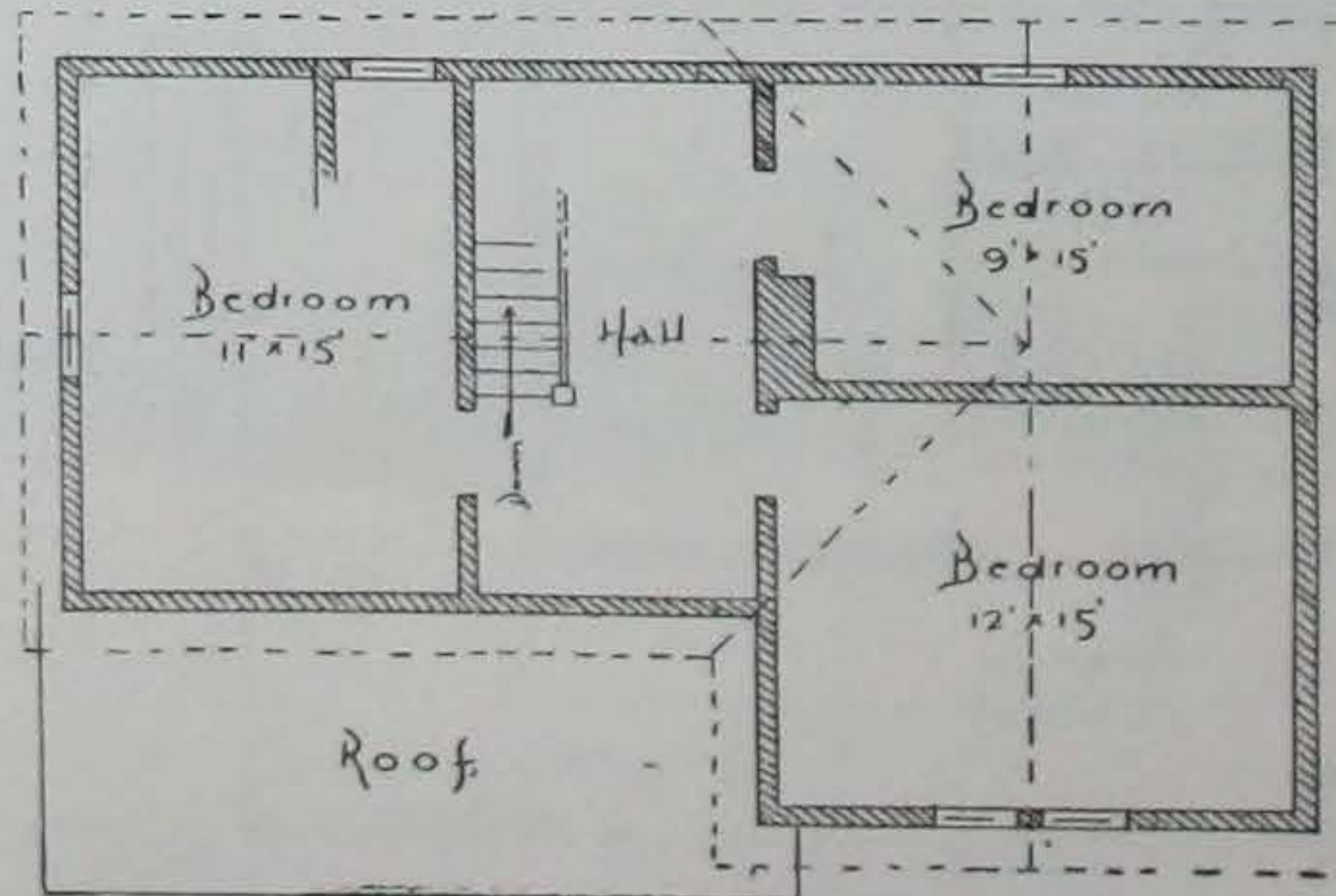
if it is on the shady side it needs no roof, if on the sunny side it can be covered with an awning or a sail.

A window should have been shown at the rear end of the hall, on the second floor plan, omitted by mistake.

The interior is plastered.



FIRST FLOOR. NO. 372



SECOND FLOOR. NO. 372



DESIGN No. 373. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 373

SIZE OF STRUCTURE: Front, 24 ft., 6 in., including veranda.
Side, 31 ft., not including veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 10 ft.; Second Story, 9 ft.

MATERIALS:
Foundation, brick piers;
First Story, clapboards;
Second Story, shingles;
Gables, panelled; Roof, shingles.

COST: \$1,500, complete.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and at different dates the cost will be somewhat modified.

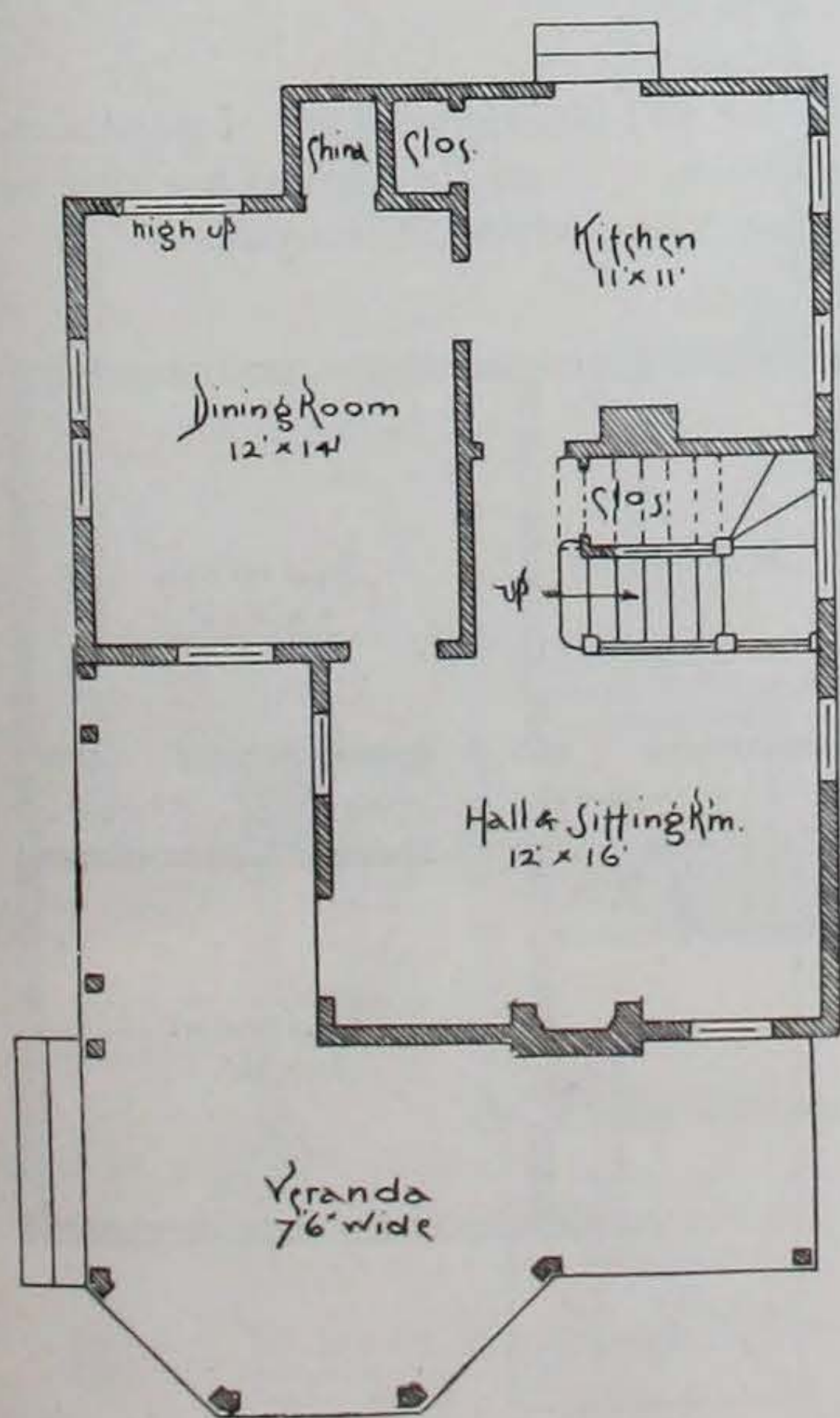
The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

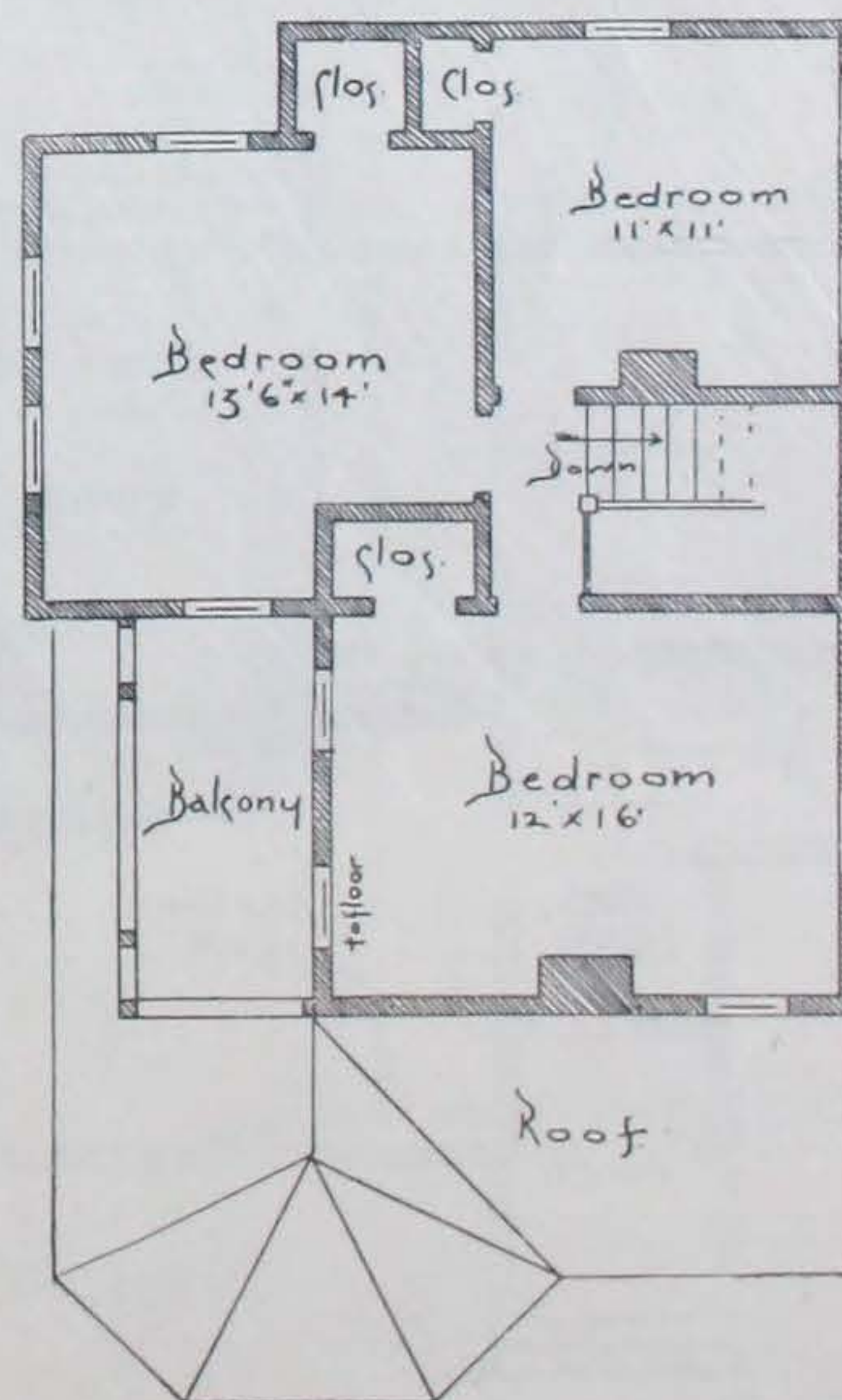
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—The staircase is in view from the sitting-room and is made a pretty feature. Large closet under the staircase. Storage-room in the attic.

No cellar. The house is set on a foundation of brick piers.



FIRST FLOOR. NO. 373



SECOND FLOOR. NO. 373



DESIGN No. 374. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 374

SIZE OF STRUCTURE: 28 ft., 6 in., extreme width. Side, 28 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles; Gables, shingles and panels; Roof, shingles.

COST: \$1,150, complete.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish,

Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

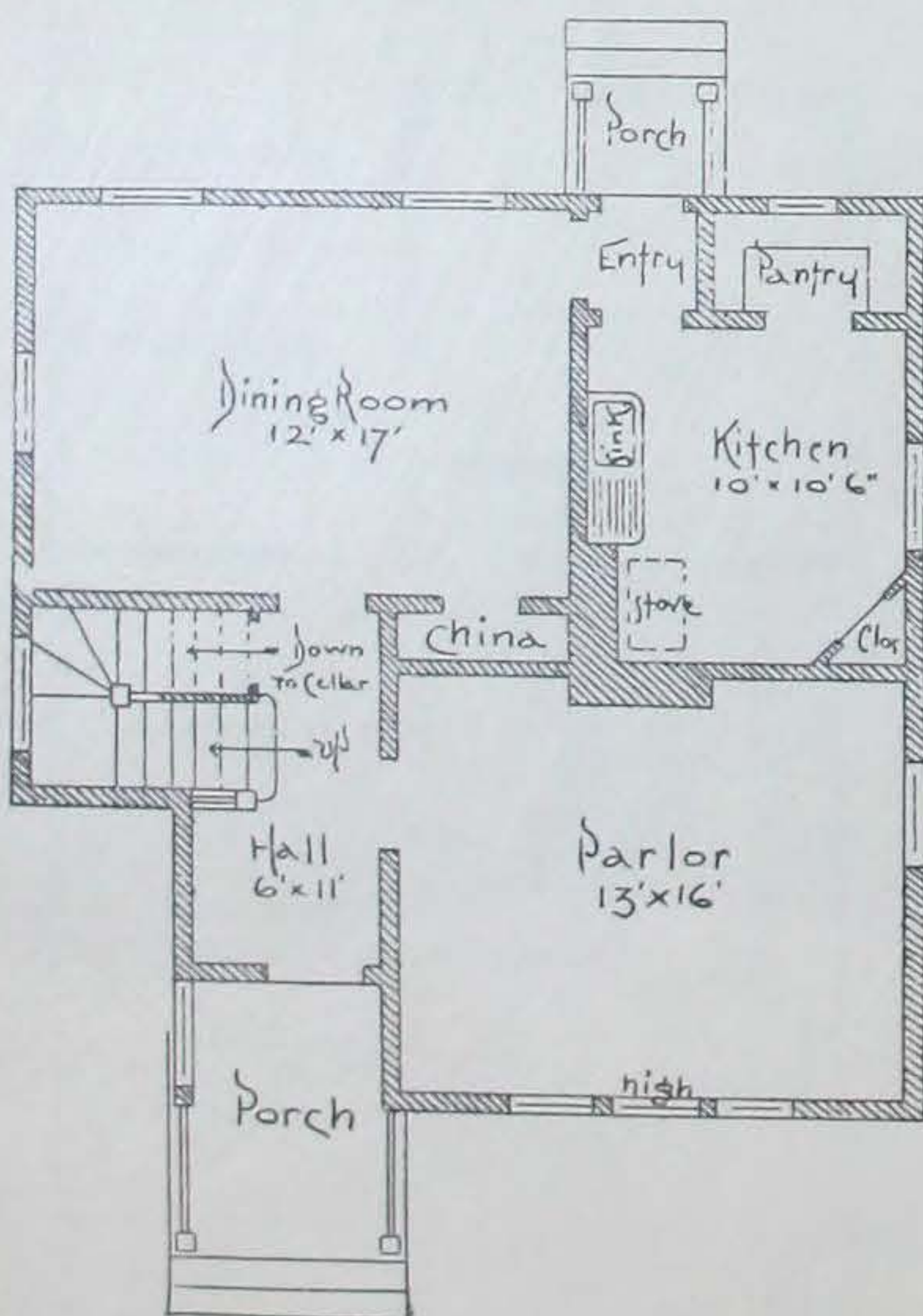
SPECIAL FEATURES.—Parlor and dining-room are of good size. As the dining-room in a small house is generally used as a sitting or living-room it is important that it be made not too small.

Three good bedrooms on the second floor.

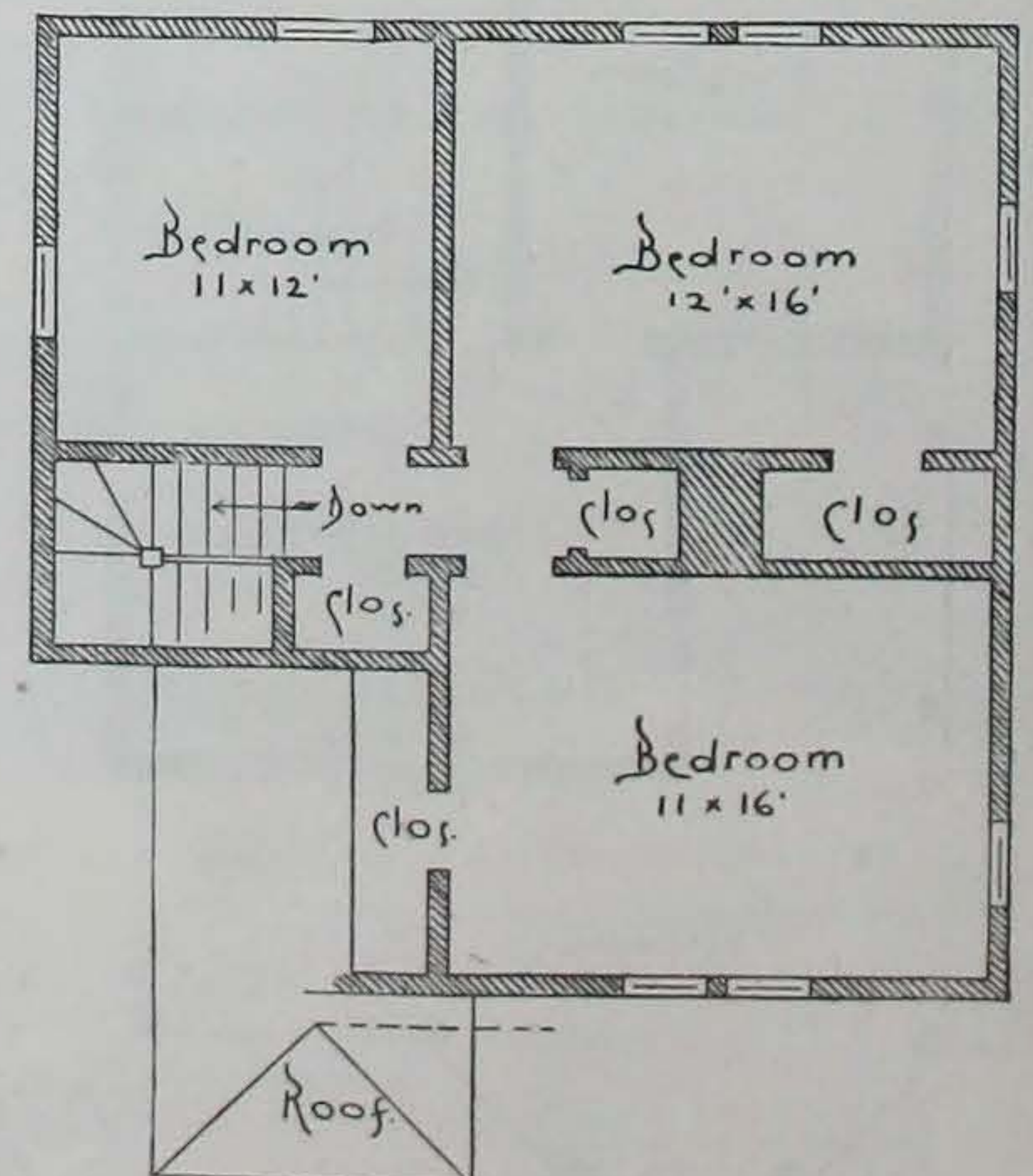
Cellar under the rear portion of house.

The parlor is thoroughly separated from the other parts of the house and can be easily kept very exclusive for the reception of callers and guests.

Properly painted (which our specifications minutely describe) this house presents a very attractive appearance.

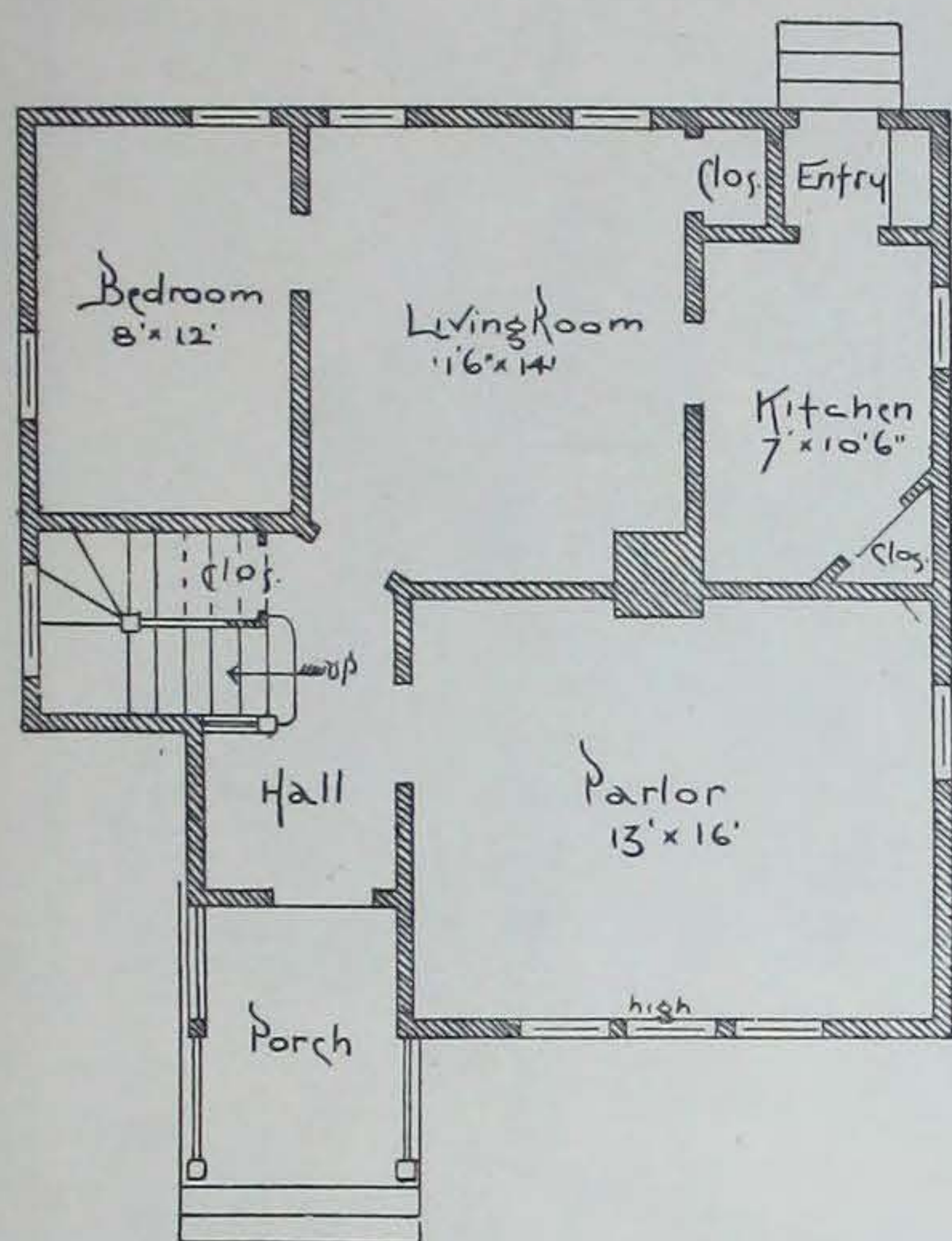


FIRST FLOOR, NO. 374



SECOND FLOOR, NO. 374

DESCRIPTION OF DESIGN NUMBER 375



FIRST FLOOR. NO. 375

Size of house, height of stories, materials and exterior appearance are the same as the preceding design.

The first floor is so arranged as to provide a bedroom, by making the kitchen and dining-room smaller.

No cellar; the foundations are brick piers.

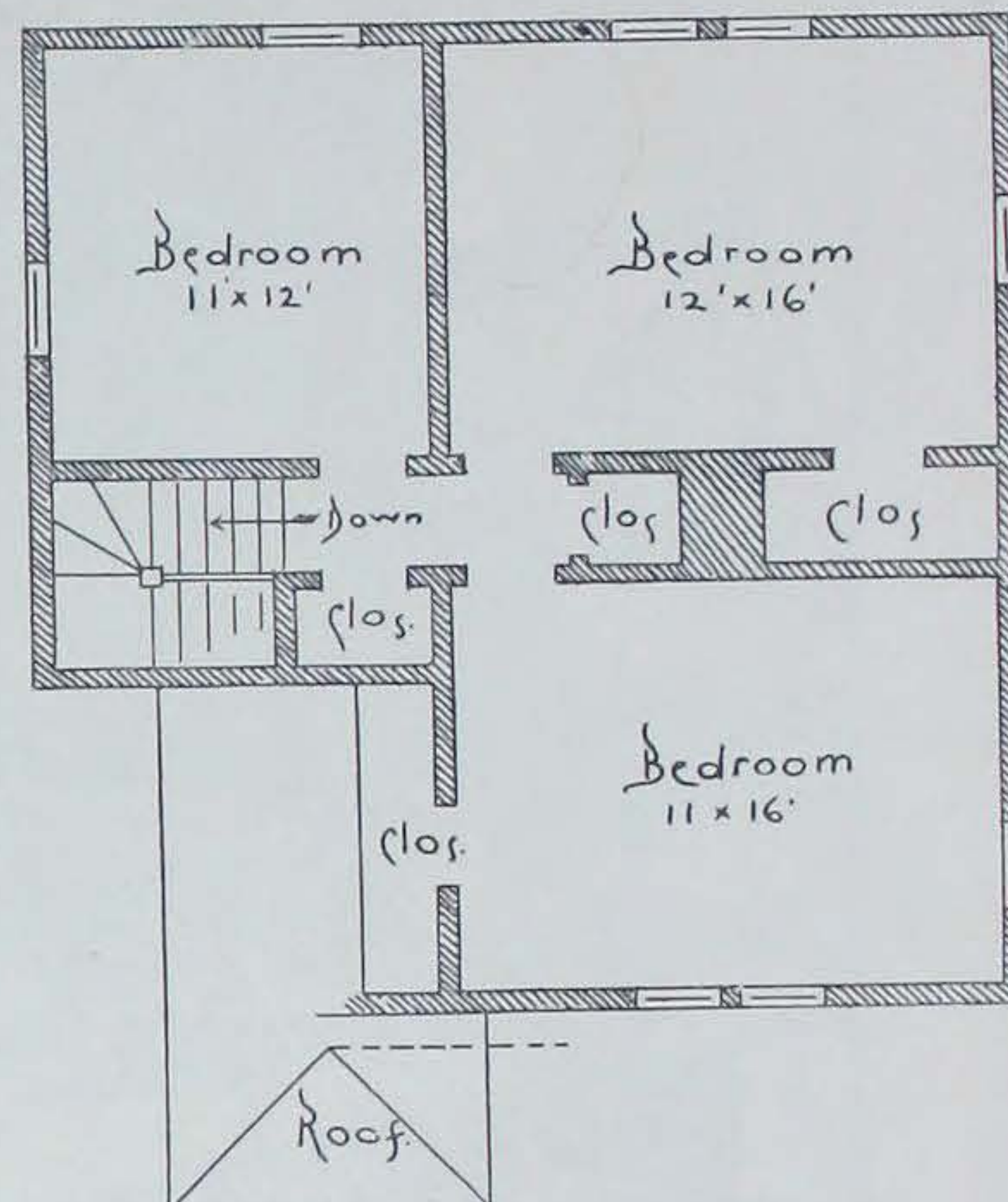
COST: \$1,100, complete.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

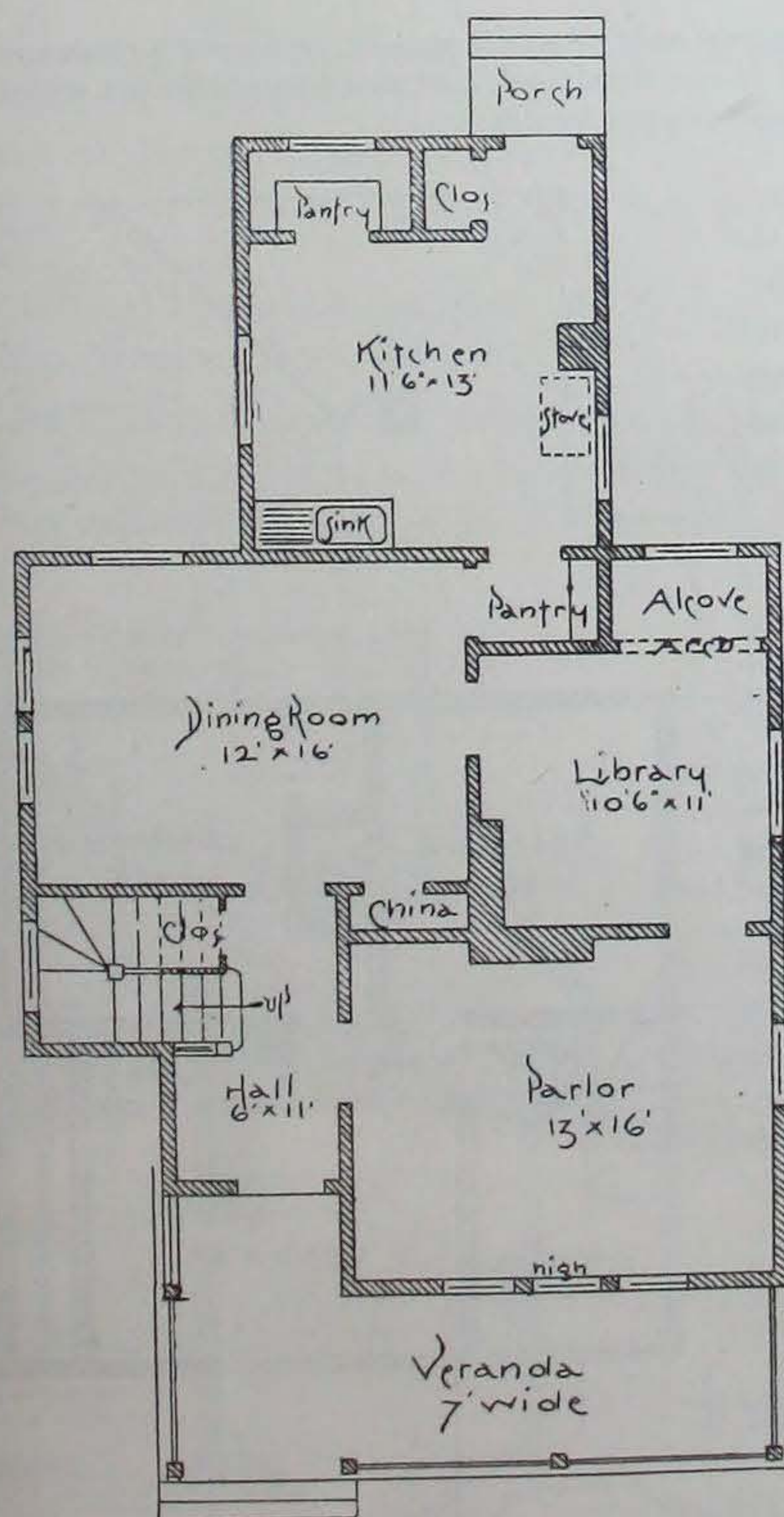
The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.



SECOND FLOOR. NO. 375

DESCRIPTION OF DESIGN NUMBER 375 (A)



FIRST FLOOR. NO. 375 (A)

Similar in height of stories, materials and exterior appearance to design No. 374. A kitchen extension 14 by 16 ft. is added, giving a library with an alcove, and a pantry between the kitchen and the dining-room.

The extension is carried high enough to give a large bath-room over it.

No cellar, the house being set on a foundation of brick piers, boarded over so as to make the house warm.

COST: \$1,600, complete, except range.

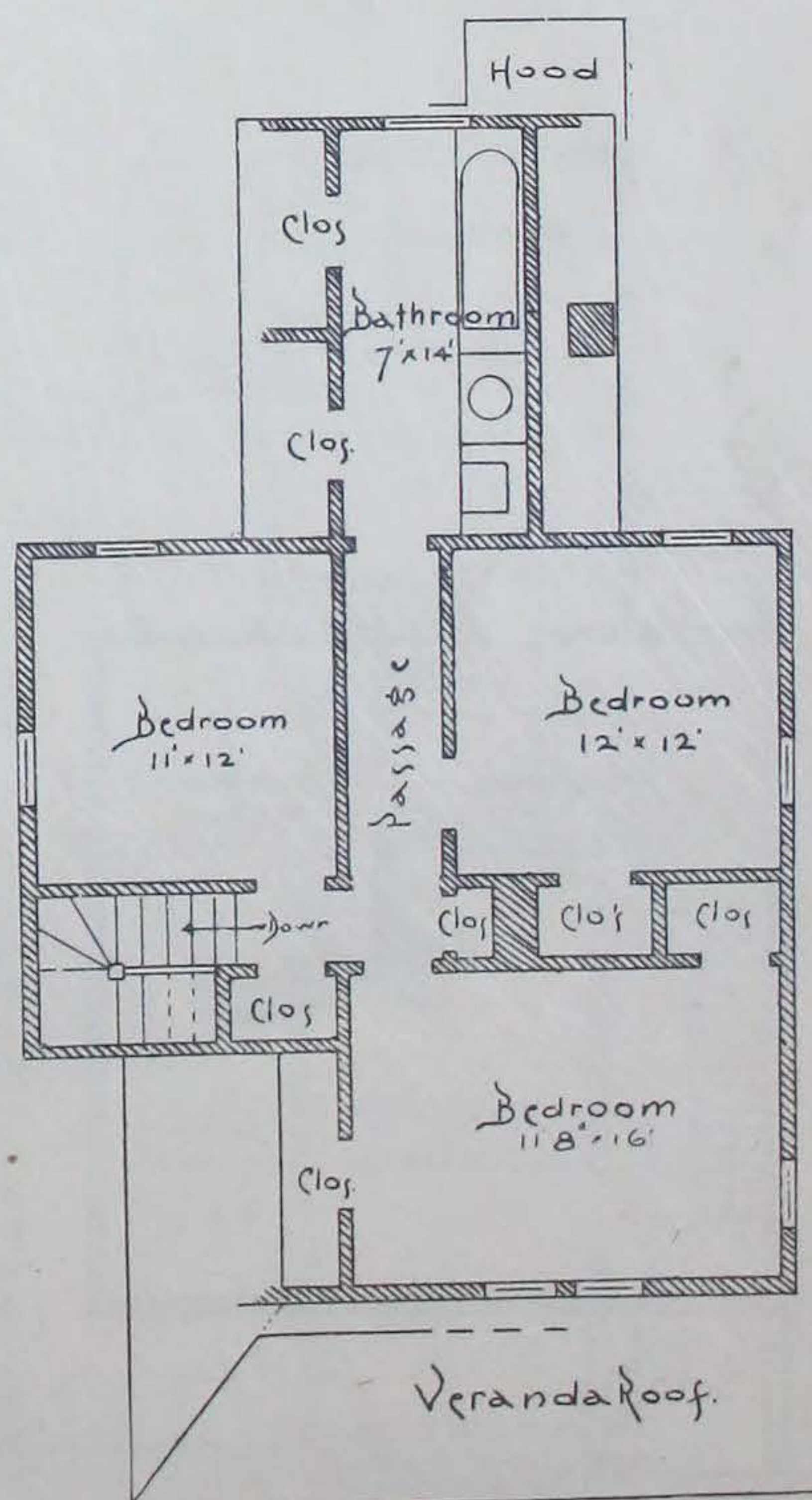
[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

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SECOND FLOOR. NO. 375 (A)



DESIGN No. 376. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 376

SIZE OF STRUCTURE: Front, 26 ft. Side, 44 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft., 4 in.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$2,200, complete, except mantels.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, Sept., 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguish-

ing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

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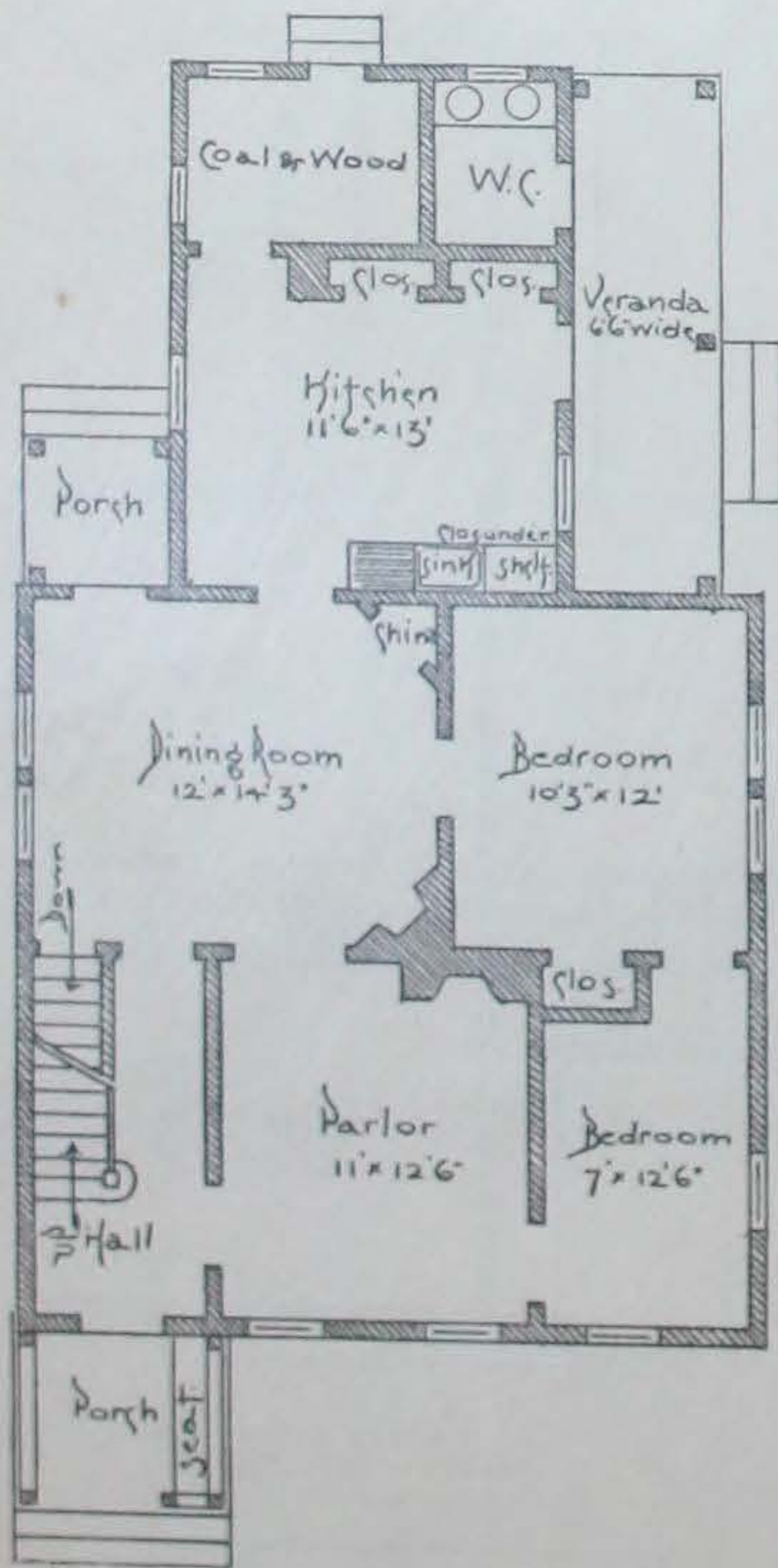
SPECIAL FEATURES.—Two bedrooms on the first floor. If preferred, the parlor and small bedroom can be combined to make one room 12 ft., 6 in. by 18 ft., 6 in.

Open fire-places in the parlor and in the dining-room. Flue connections for the bedrooms.

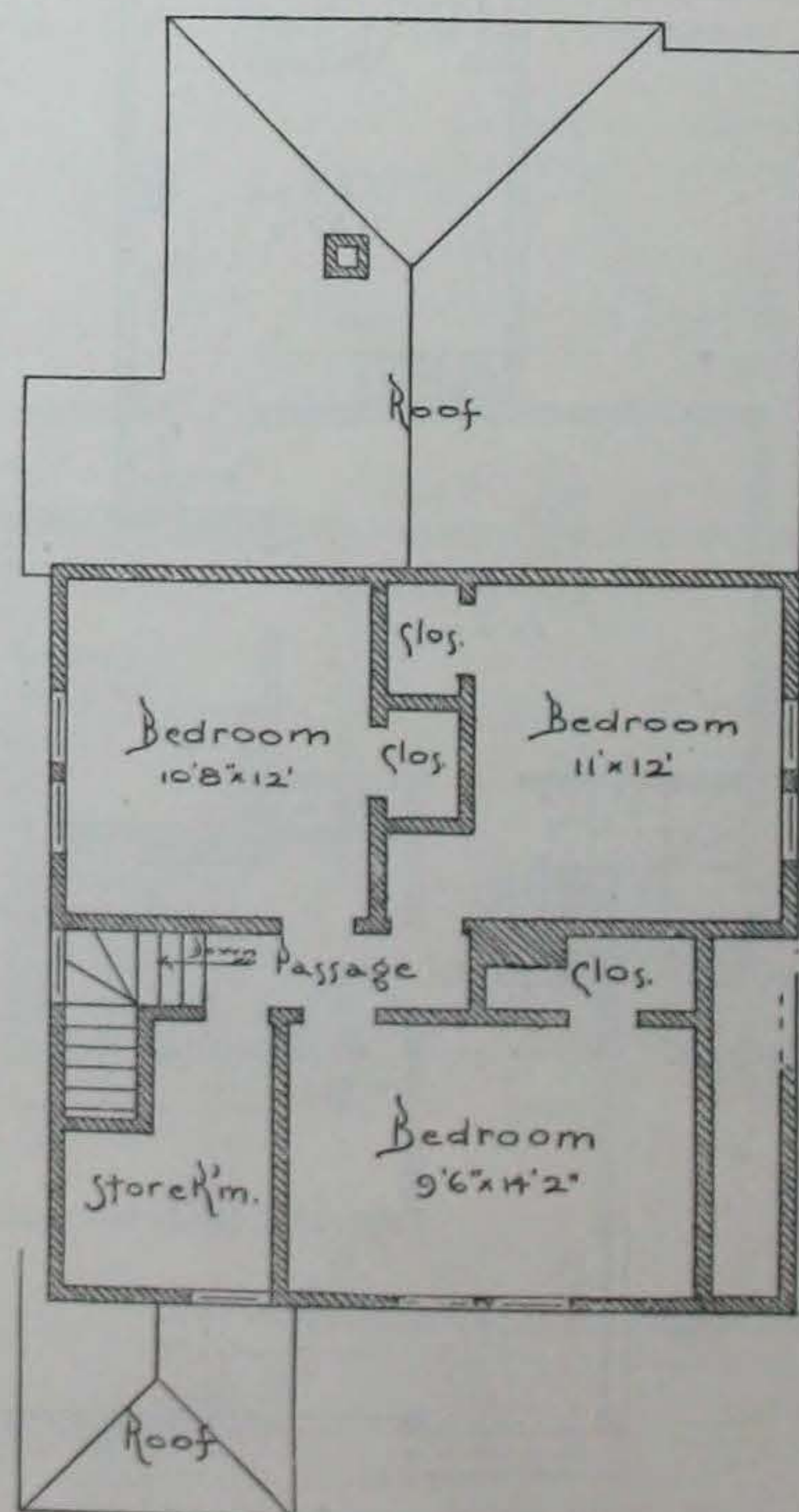
An earth closet is provided, entered from the side porch.

The bedrooms of the second floor are slightly cut by the roof; the rooms are cooled by a current of air which is allowed to pass from the outside through openings under the eaves, between the plastering and the rafters, and out through the attic windows.

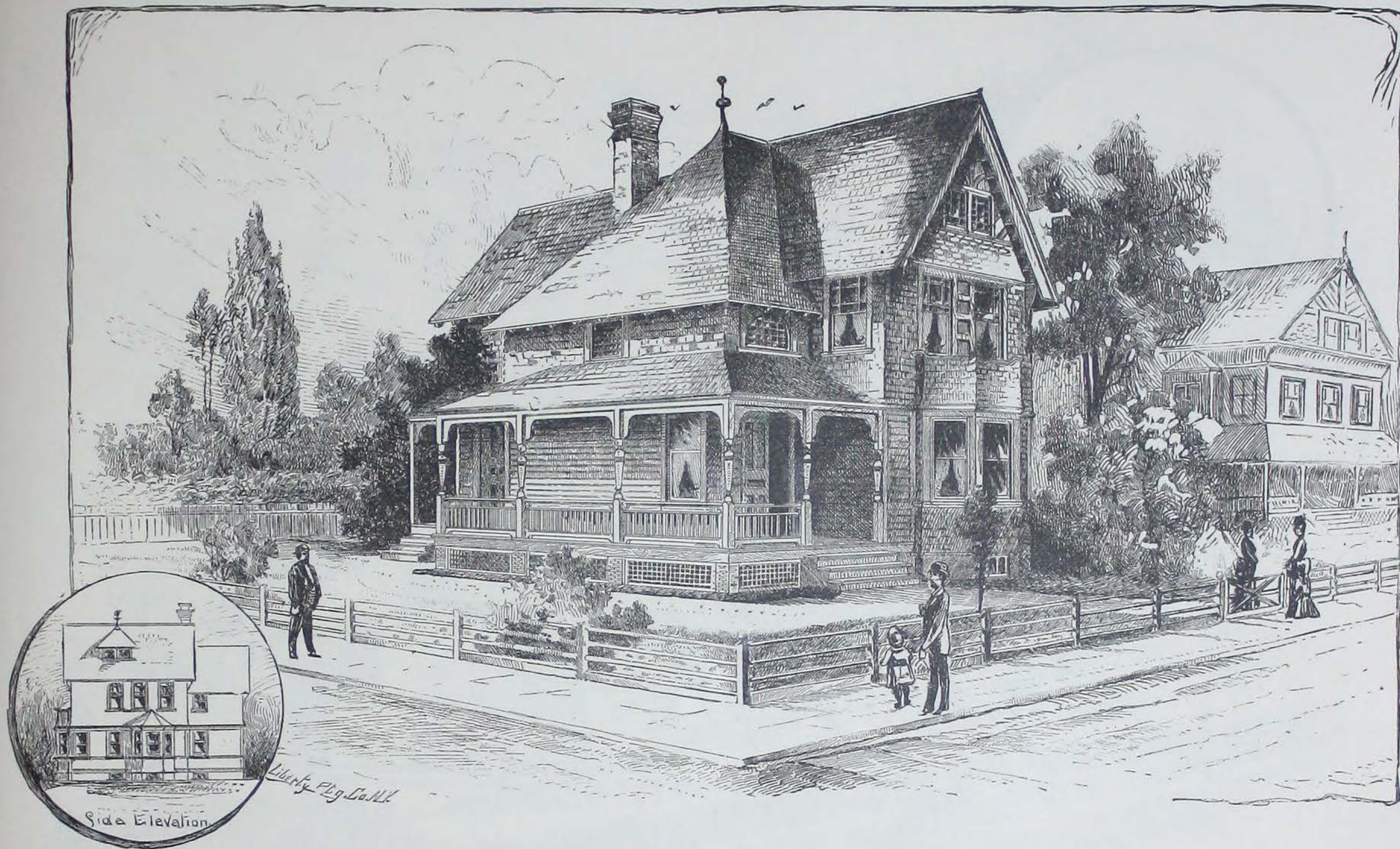
Cellar under the whole house.



FIRST FLOOR. NO. 376



SECOND FLOOR. NO. 376



DESIGN No. 377. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 377

SIZE OF STRUCTURE: Front, 23 ft., 6 in., not including veranda. Side, 40 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 8 ft., 6 in.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles; Roof, shingles.

COST: \$2,500, complete, except mantels, range and furnace.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

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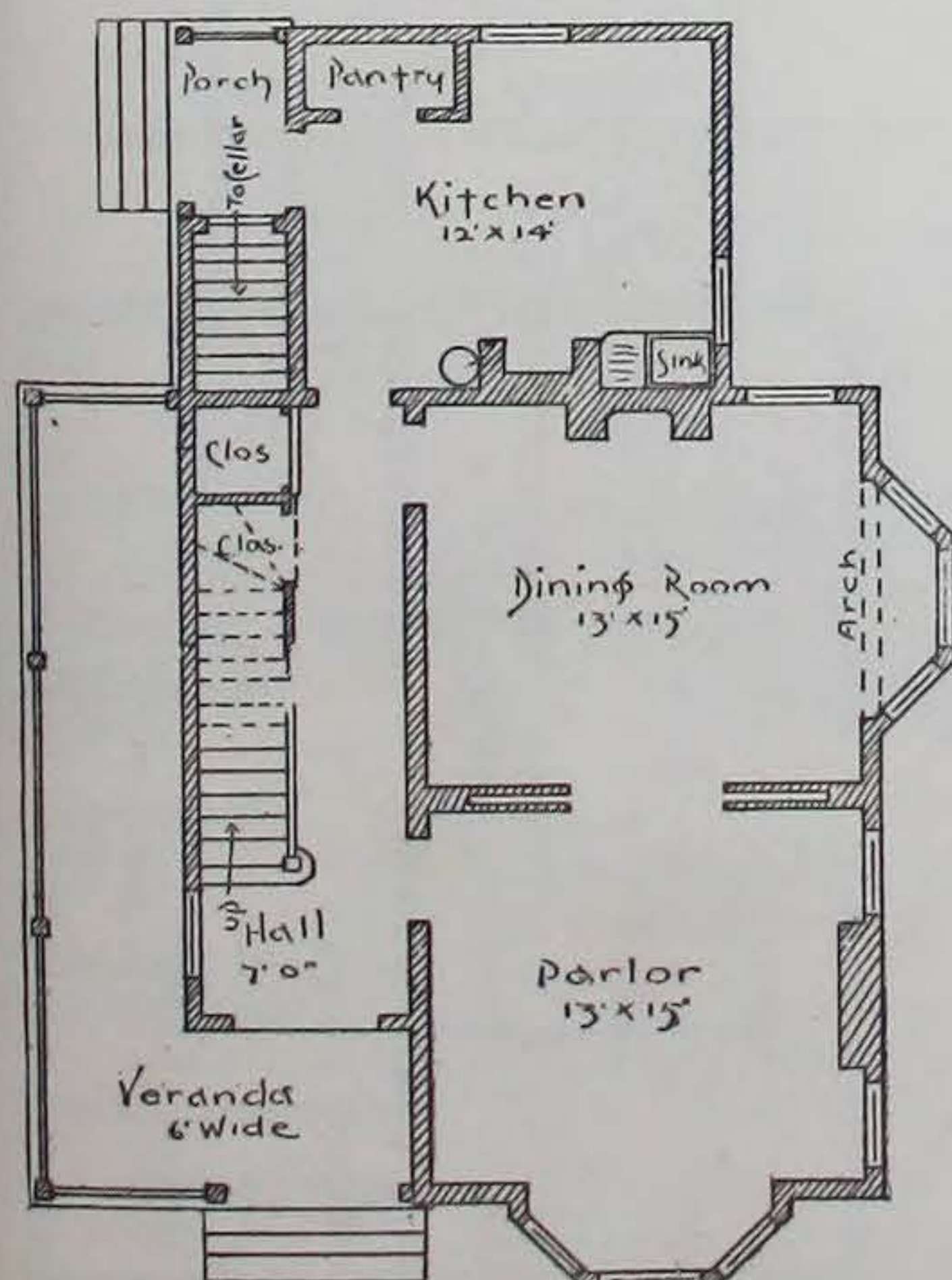
SPECIAL FEATURES.—Ample veranda. Parlor and dining-room are connected by sliding doors.

An open fire-place in the dining-room; false chimney breast in the parlor.

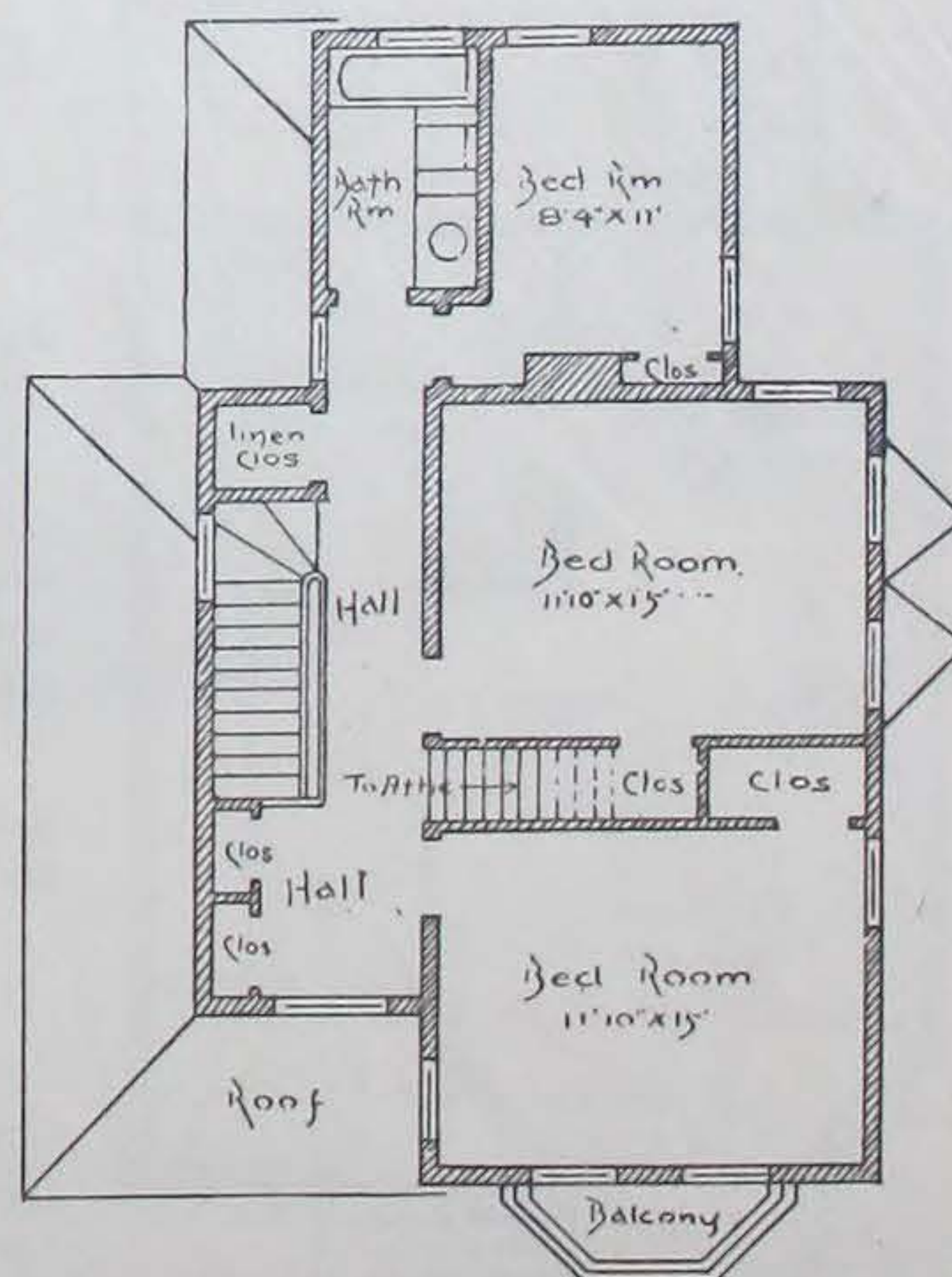
Cellar under the whole house with 8 in. brick walls. Attic, unfinished.

Cottages like this should recommend themselves to rising young men. Its accommodations are ample for a small family. Its appearance should satisfy the most cultured taste. There is a nice appropriateness in a young man of moderate means owning and occupying a house that meets the approval of the community as well as of himself. Neighbors will talk, and a new house affords a fine subject. All they can say of this is that it is a credit and an ornament to the neighborhood, and (probably) that it is well within the means of the owner.

In after years when ampler means and a larger family warrant and require it, this structure can be moved back on the plot (an easy matter with a small house) and a larger and more pretentious dwelling can be erected on the same site.



FIRST FLOOR. NO. 377



SECOND FLOOR. NO. 377



DESIGN No. 378. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 378

SIZE OF STRUCTURE: Front, 23 ft., 6 in. Side, 43 ft., 6 in.
 SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.;
 Second Story, 8 ft.

MATERIALS: Foundation, stone and brick; First Story,
 clapboards; Second Story, shingles; Roof, shingles.

COST: \$2,400, complete, except mantels and heater.

[See page 219 for information about details, specifications,
 bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighbor-
 hood of New York City, September, 1886. In other localities and at dif-
 ferent dates the cost will be somewhat modified. The publishers will be
 glad to acquaint the intending builder with this modified cost at any time.

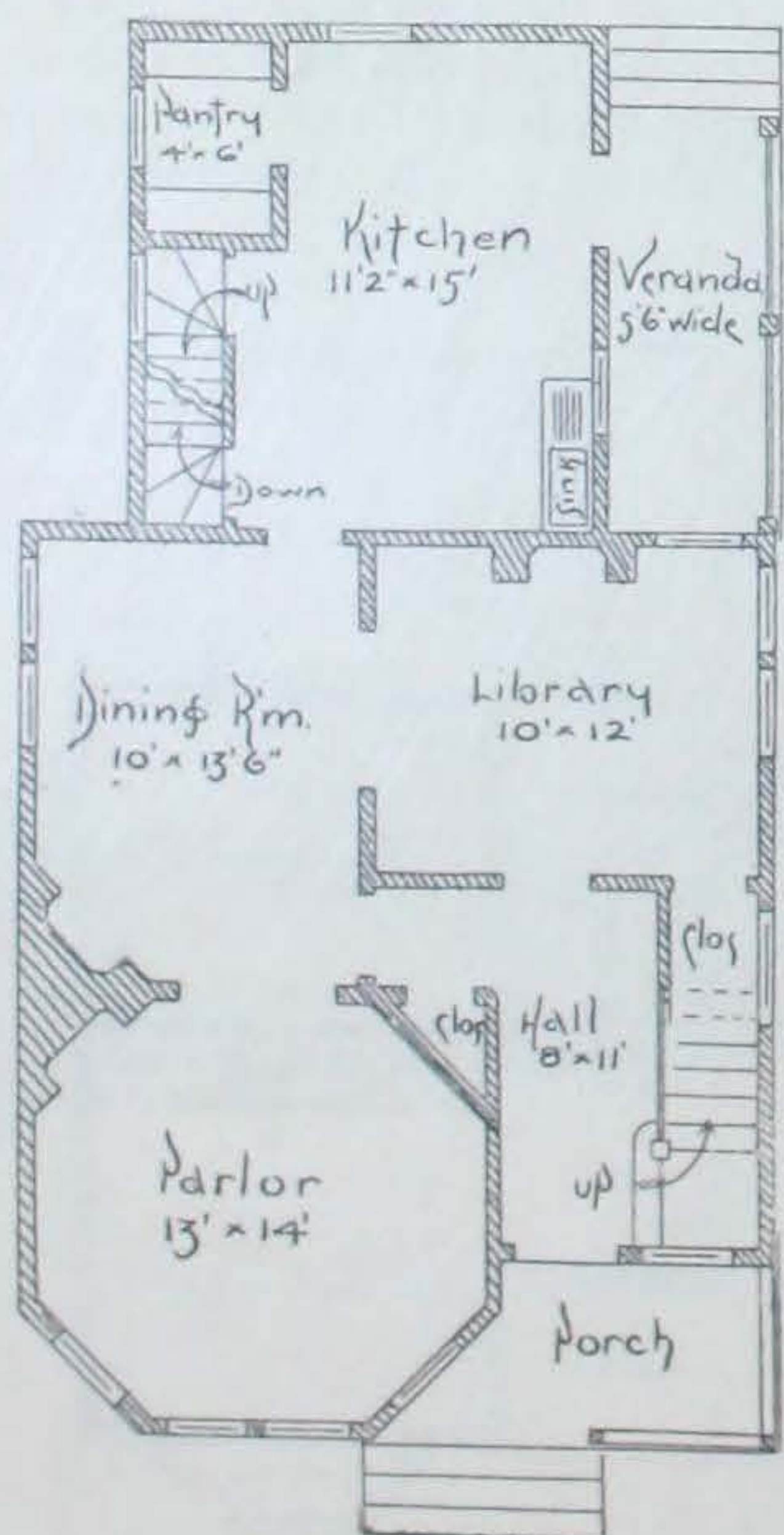
This design can be reversed, enlarged, reduced or altered to suit
 special wants. The specifications can be altered, also, to employ different
 materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—A compactly arranged plan.

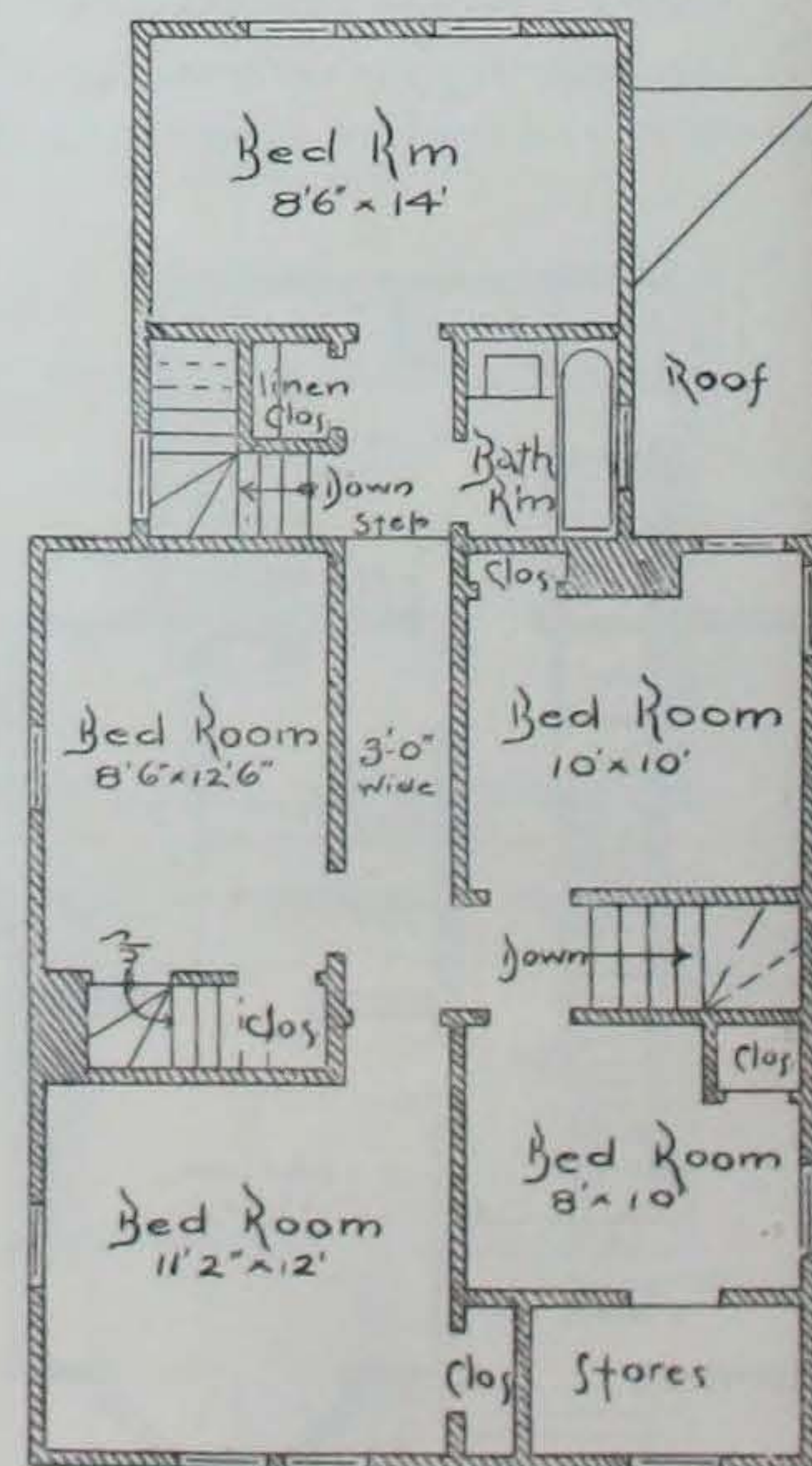
Open fire-places in the parlor, dining-room and library.

Five bedrooms and a bath-room on the second floor. The
 attic is unfinished.

Cellar under the whole house. Heater pipes and registers
 are provided, ready for connection with a furnace.



FIRST FLOOR, NO. 378



SECOND FLOOR, NO. 378



DESIGN No. 379. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 379

SIZE OF STRUCTURE: Front, 23 ft., 4 in.; including verandas, 35 ft., 6 in. Side, 43 ft., not including front veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 8 ft., 10 in.; Second Story, 8 ft., 4 in.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$2,500, complete, except mantels.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—The staircase hall is 10 x 11 ft.

Open fire-places in the parlor, the sitting-room and the dining-room.

The vestibule door is made to slide so as not to interfere with the passage to the stairway.

Five good bedrooms on the second floor. The attic is only available for storage purposes.

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

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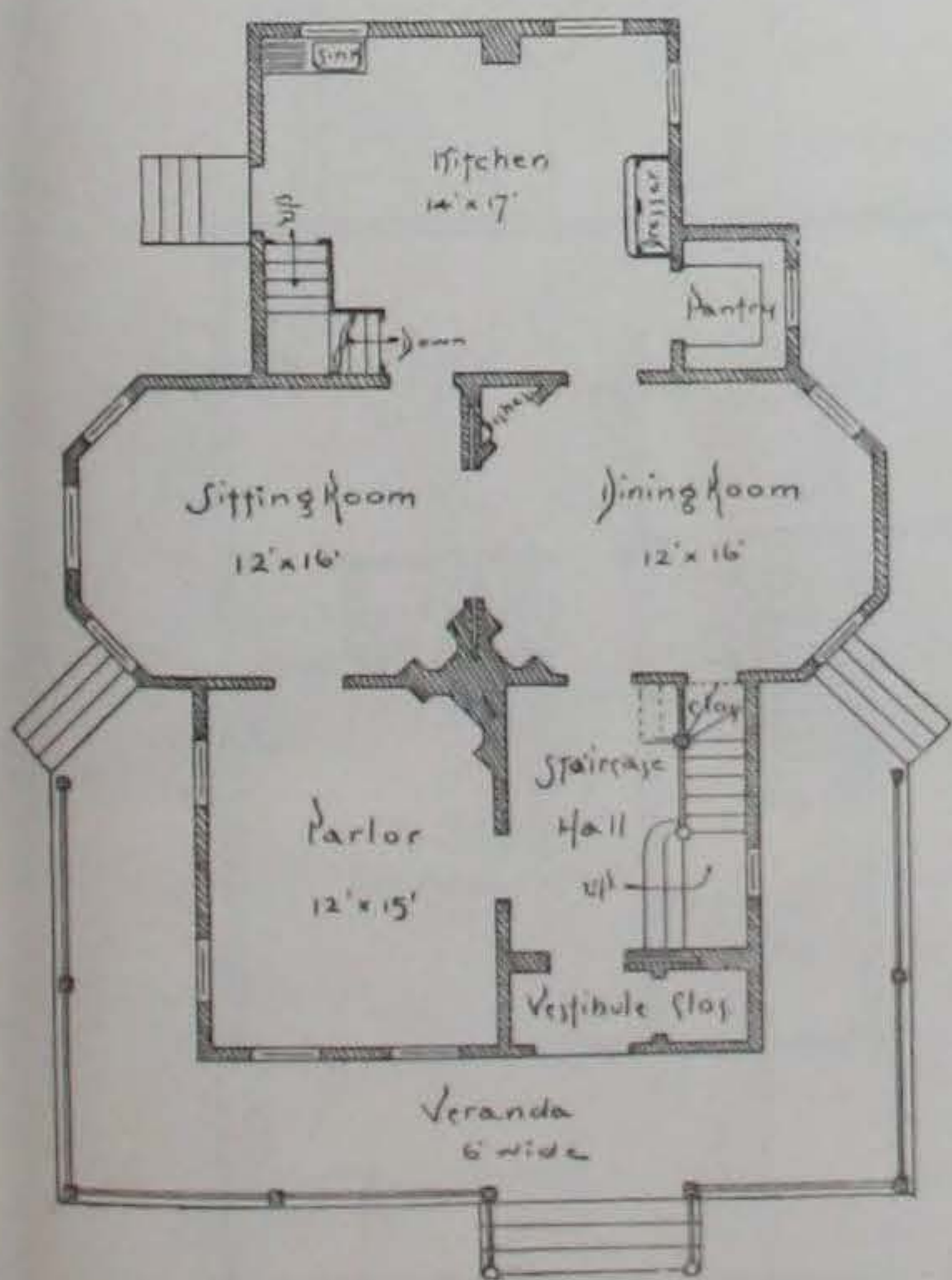
Well ventilated, so as to make the rooms of second floor comfortable in warm weather.

Back stairway from the kitchen to the second floor.

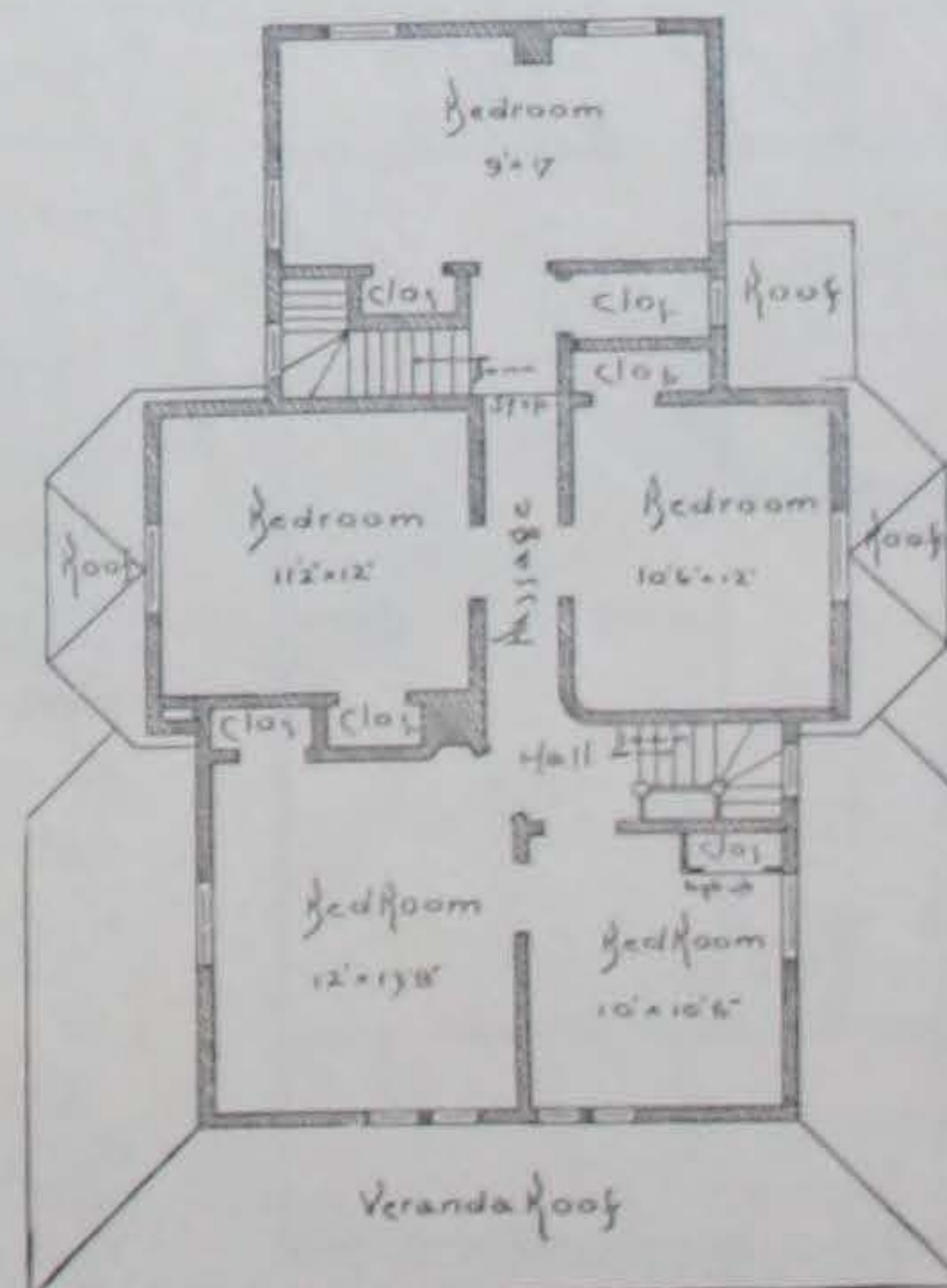
Sliding doors between the sitting and the dining-rooms.

The side walls of the second story, where cut by the roof, are 4 ft high to the point where the slant of roof begins.

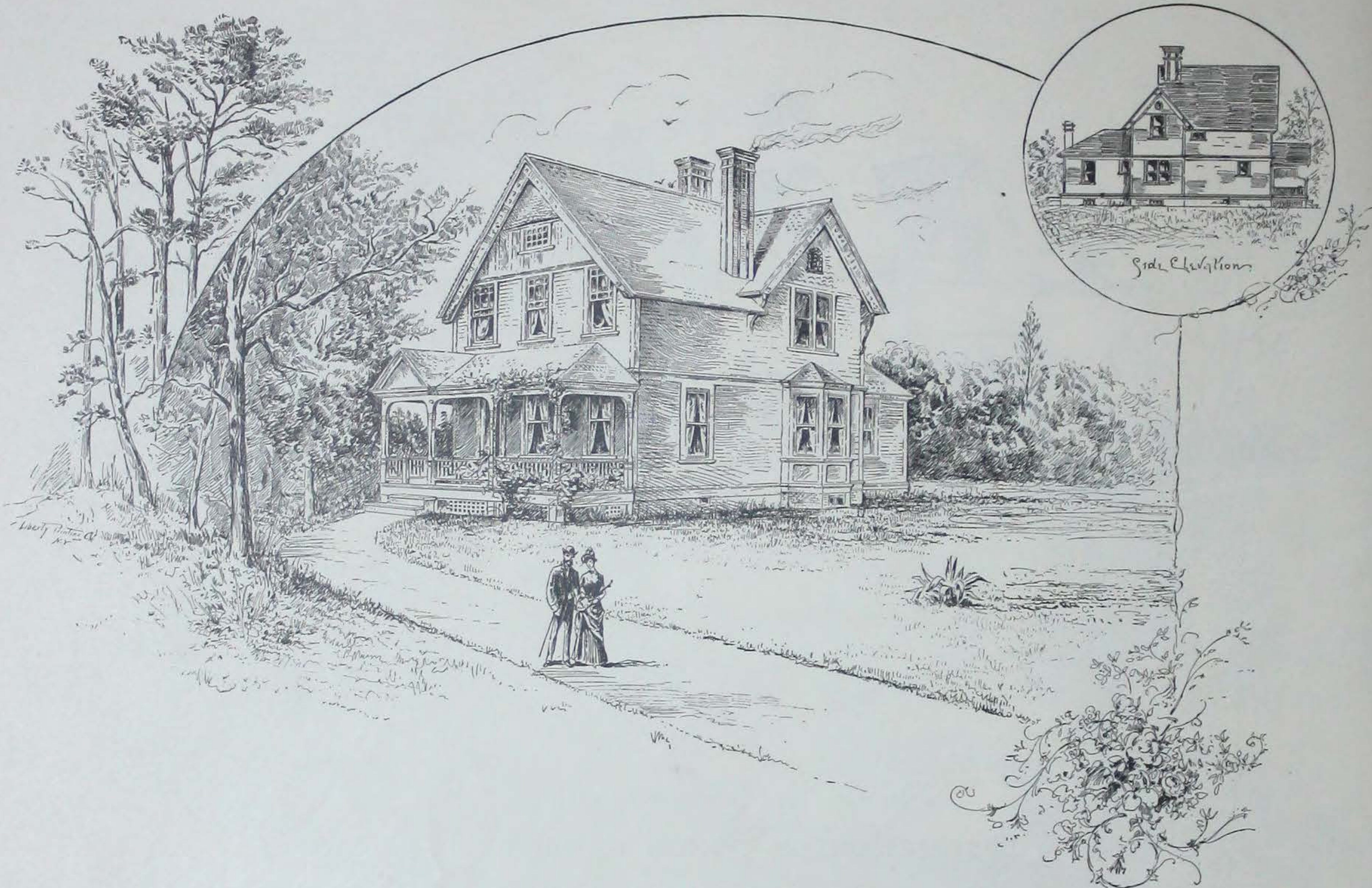
Cellar under the kitchen only, but there are brick walls under the whole house.



FIRST FLOOR. NO. 379



SECOND FLOOR. NO. 379



DESIGN No. 380. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 380

SIZE OF STRUCTURE: Front, 24 ft. Width over all, 32 ft. Side, 47 ft., 6 in.

SIZE OF ROOMS: See floor plans.

somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

SPECIAL FEATURES.—Simple and conveniently arranged floor plan.

Sliding doors connect the parlor and the dining-room.

No open fire-places, but there are chimney breasts for mantels in the parlor and the dining-room.

Easy staircase, with a closet opening off the lower platform, convenient for keeping hats, coats and umbrellas.

Good storage-room in the attic, which is well lighted and well ventilated

Walls of the second story are 6 ft., 6 in. high at the point where the slant of the roof begins.

Cellar under the kitchen, dining and sitting-rooms.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft., 6 in.; Second Story, 9 ft.

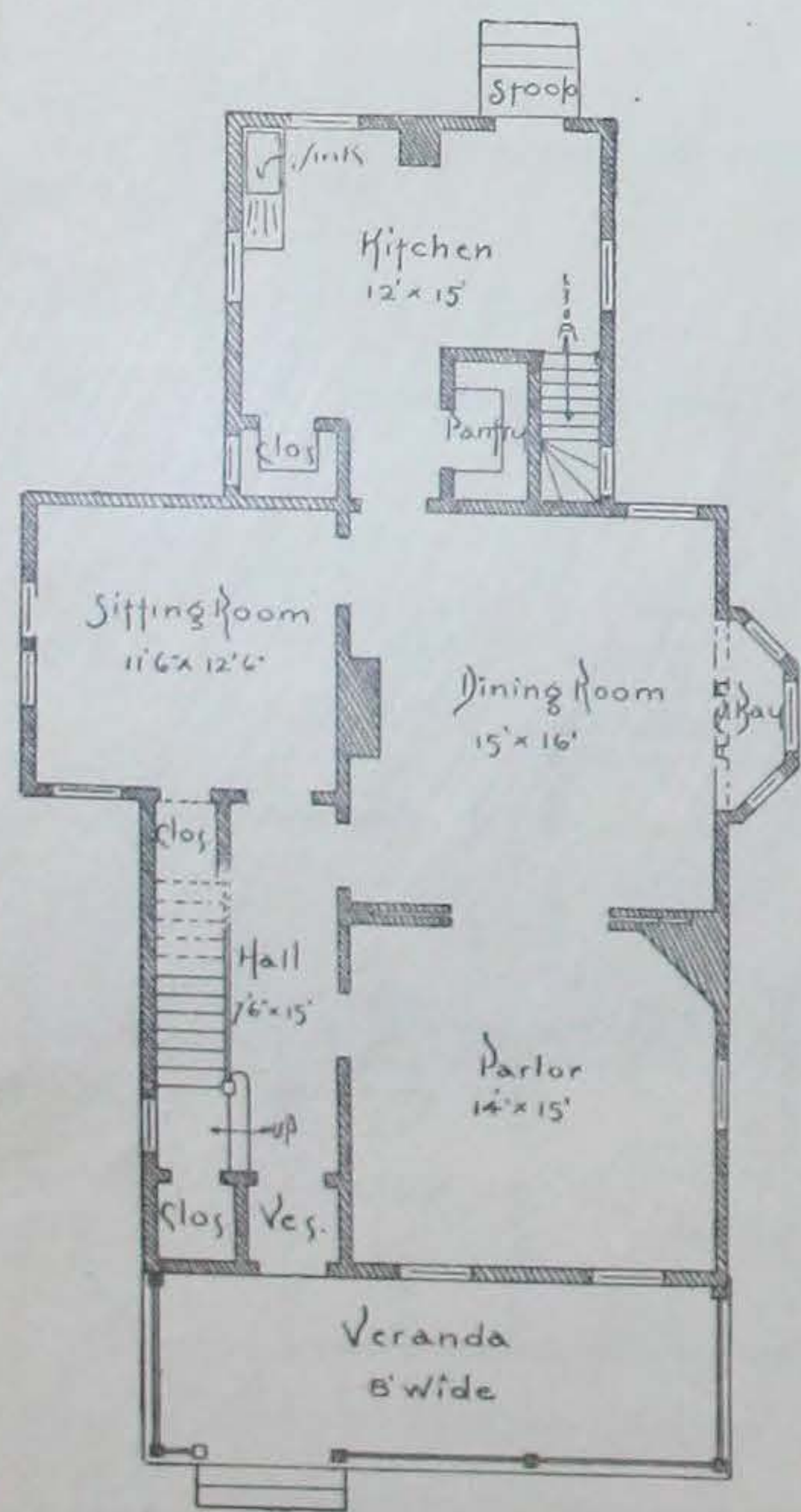
MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, clapboards; Gables, shingles and panelling; Roof, shingles.

COST: \$2,600, complete, except mantels and range.

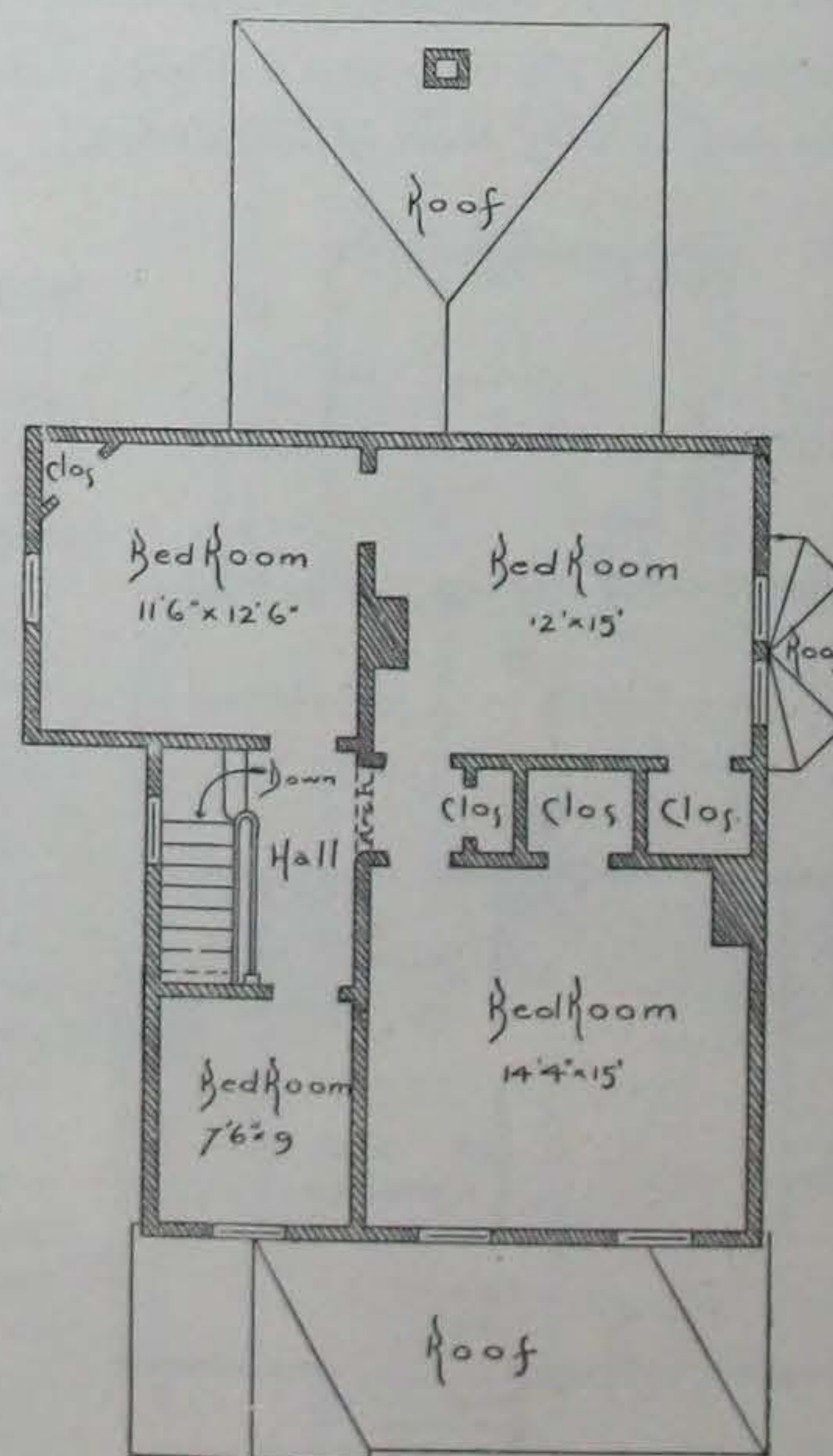
[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

NOTE

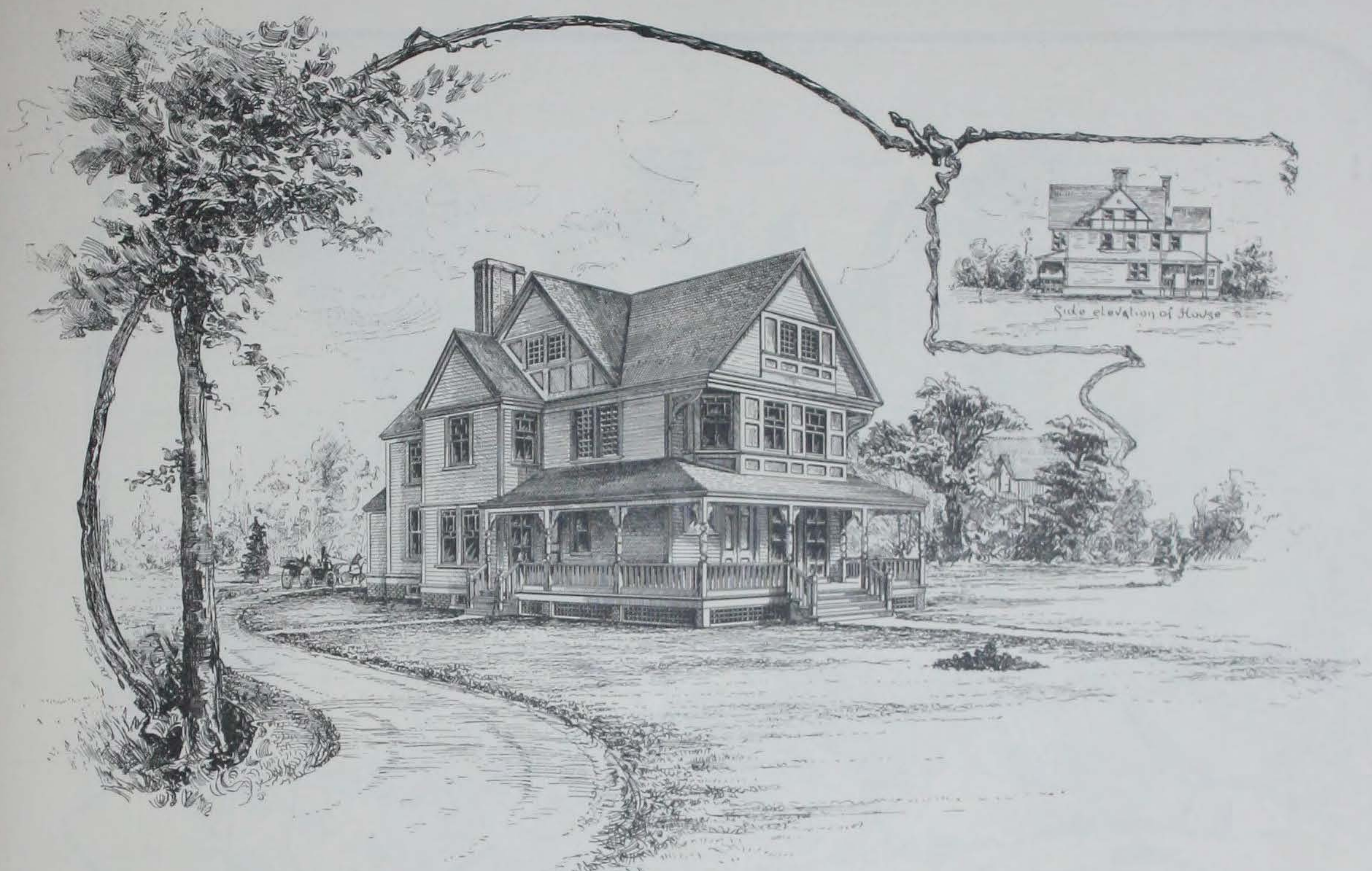
The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and at different dates the cost will be



FIRST FLOOR, NO. 380



SECOND FLOOR, NO. 380



DESIGN No. 381. PERSPECTIVE VIEW
DESCRIPTION OF DESIGN NUMBER 381

SIZE OF STRUCTURE: Front, 26 ft.; including veranda, 32 ft., 6 in. Side, 48 ft., not including front veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft.; Attic Story, 8 ft.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, clapboards; Gables, wood panels; Roof, slate.

COST: \$3,500, complete, except mantels, range and furnace.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—Large hall and hardwood staircase.

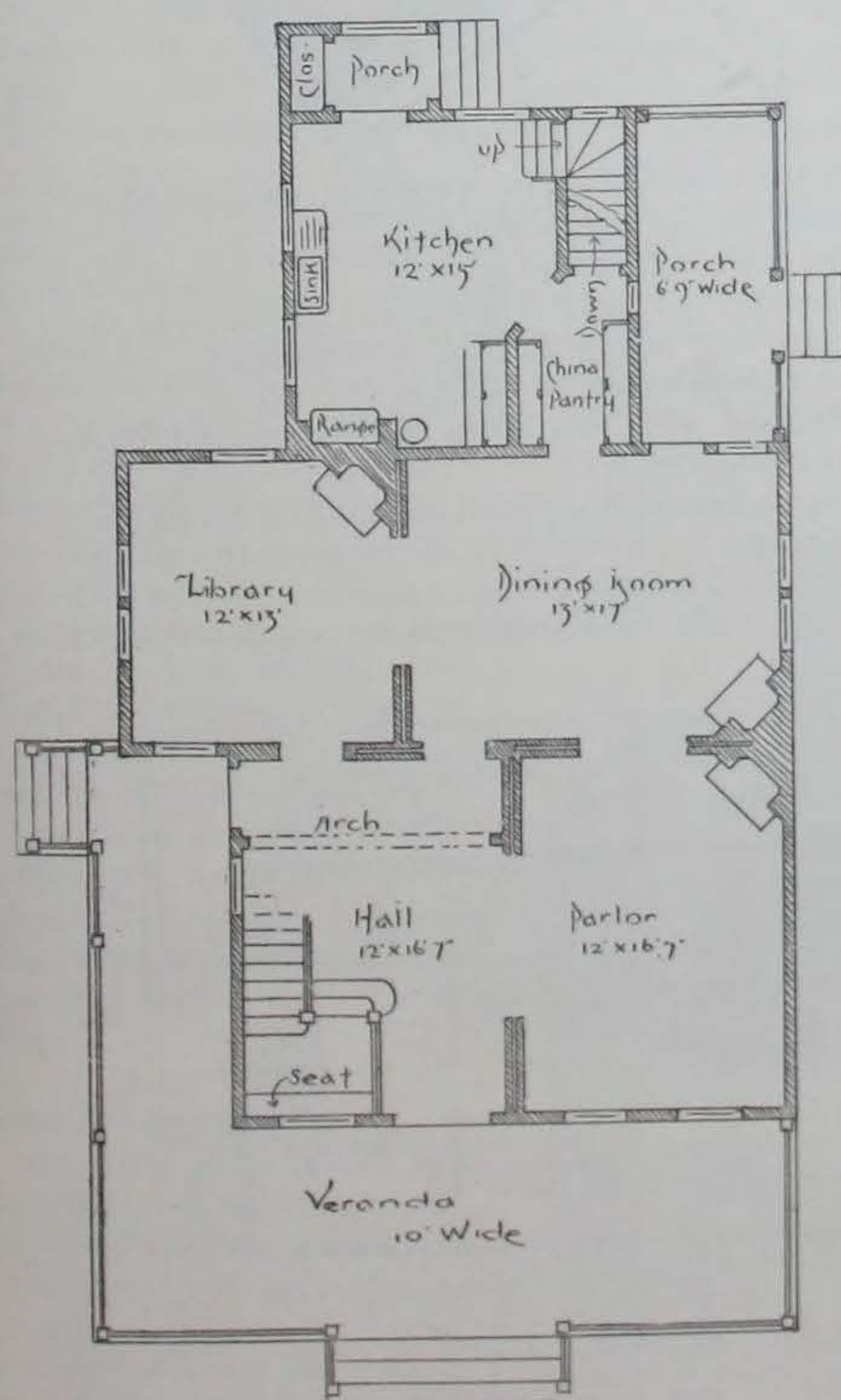
Rooms of the first story connected by wide sliding doors.

Pipes and registers for the furnace are provided.

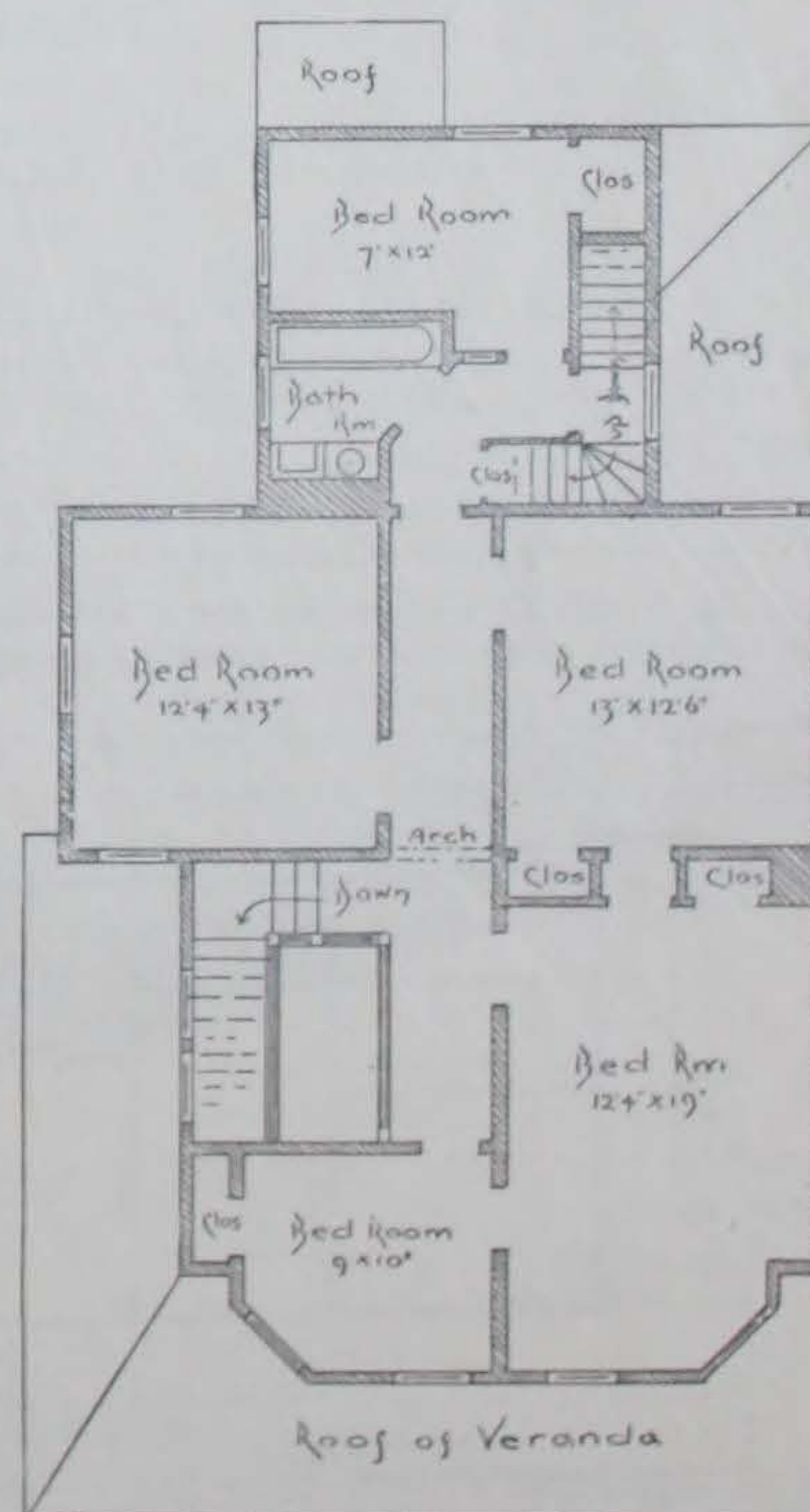
Cellar under kitchen, library and dining-room.

Open fire-places in parlor, dining-room and library.

Three good bedrooms are finished in the attic.



FIRST FLOOR. NO. 381



SECOND FLOOR. NO. 381



DESIGN No. 382. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 382

SIZE OF STRUCTURE: Front, 40 ft.; extreme width including side verandas and kitchen "L," 65 ft. Side, 25 ft.; including verandas, 42 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 9 ft., 6 in.; Second Story, 8 ft.

MATERIALS: Foundation, brick piers; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$3,500, complete.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—Suitable for a Southern climate or for a summer residence at the seashore or in the mountains. Verandas

on three sides protect the lower rooms from the heat and glare of the sun. Covered balconies on the second story.

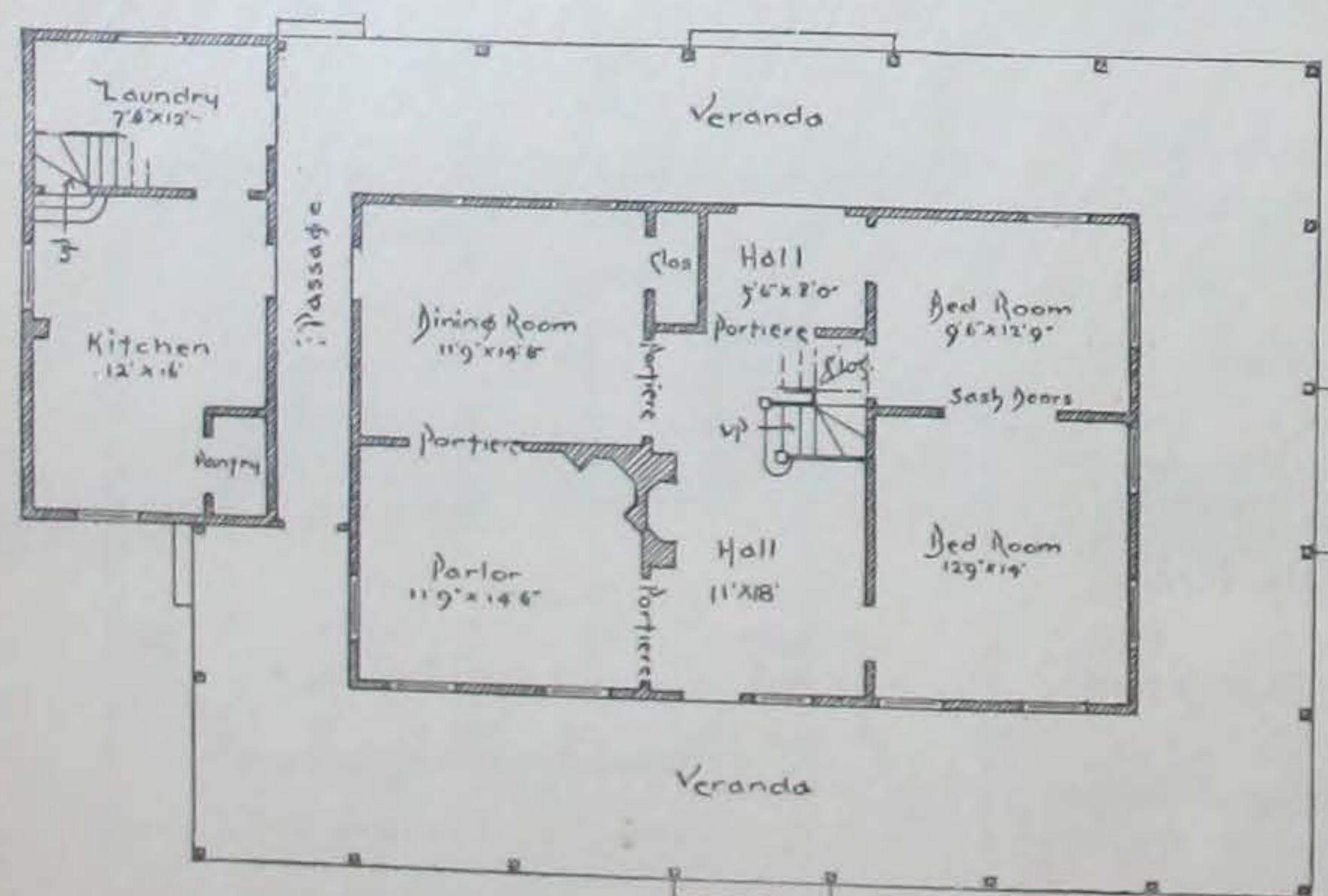
The tower can be entered from the attic.

No doors between the hall and the parlor, the hall and the dining-room, nor between the parlor and the dining-room. Large openings are left where curtains can be hung, if desired.

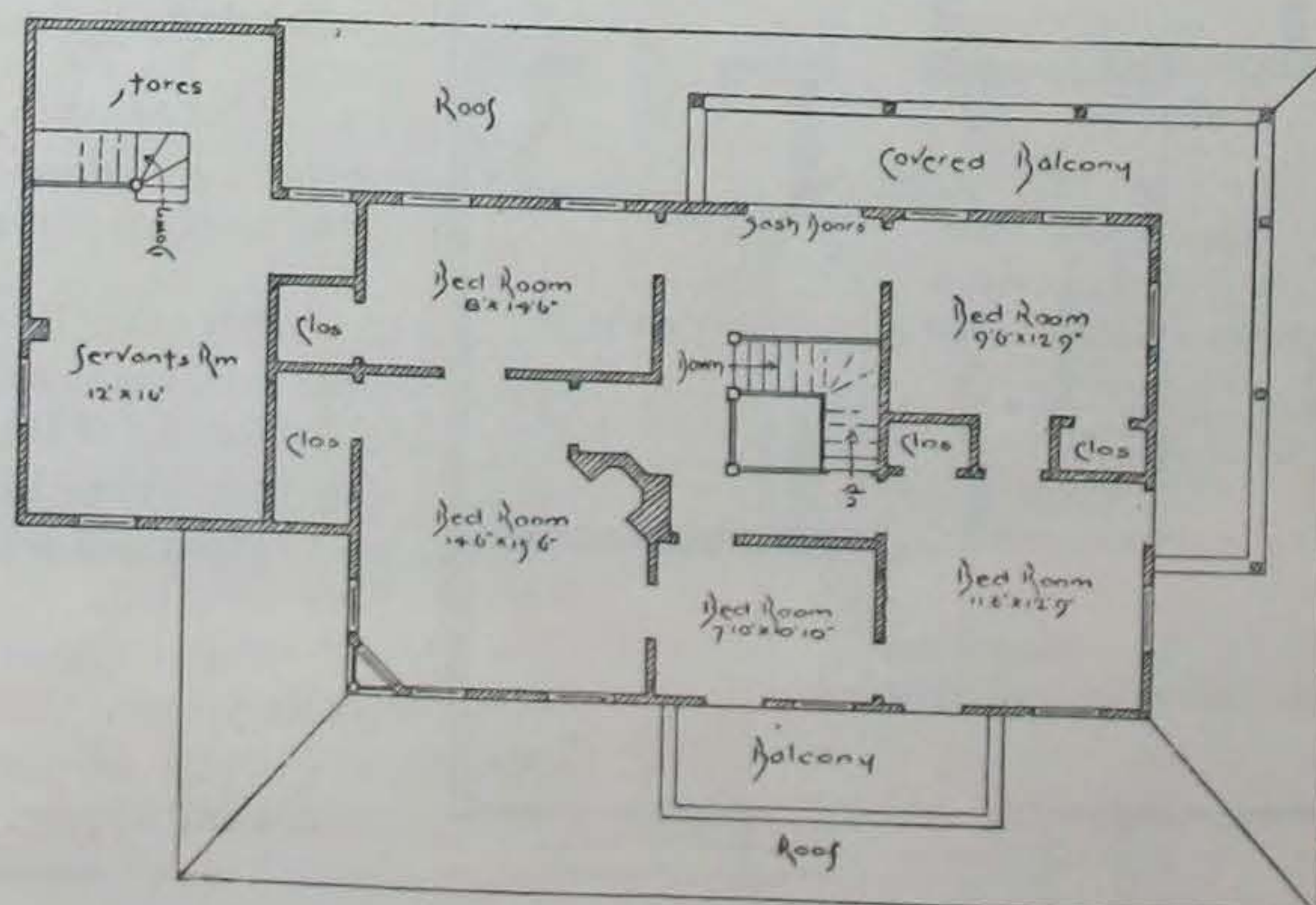
The interior is finished with two coats of plaster, sand finish. Open fire-places. No cellar.

The kitchen being separated from the main building by an open passage, the heat and odors are completely cut off from the house.

The servant's room is above the kitchen and not connected with the rest of the house. On the next page will be found a cheaper modification of this plan.



FIRST FLOOR, NO. 382



SECOND FLOOR, NO. 382

DESCRIPTION OF DESIGN NUMBER 383

A modification of the preceding design, the general appearance, heights of stories, materials, &c., being the same.

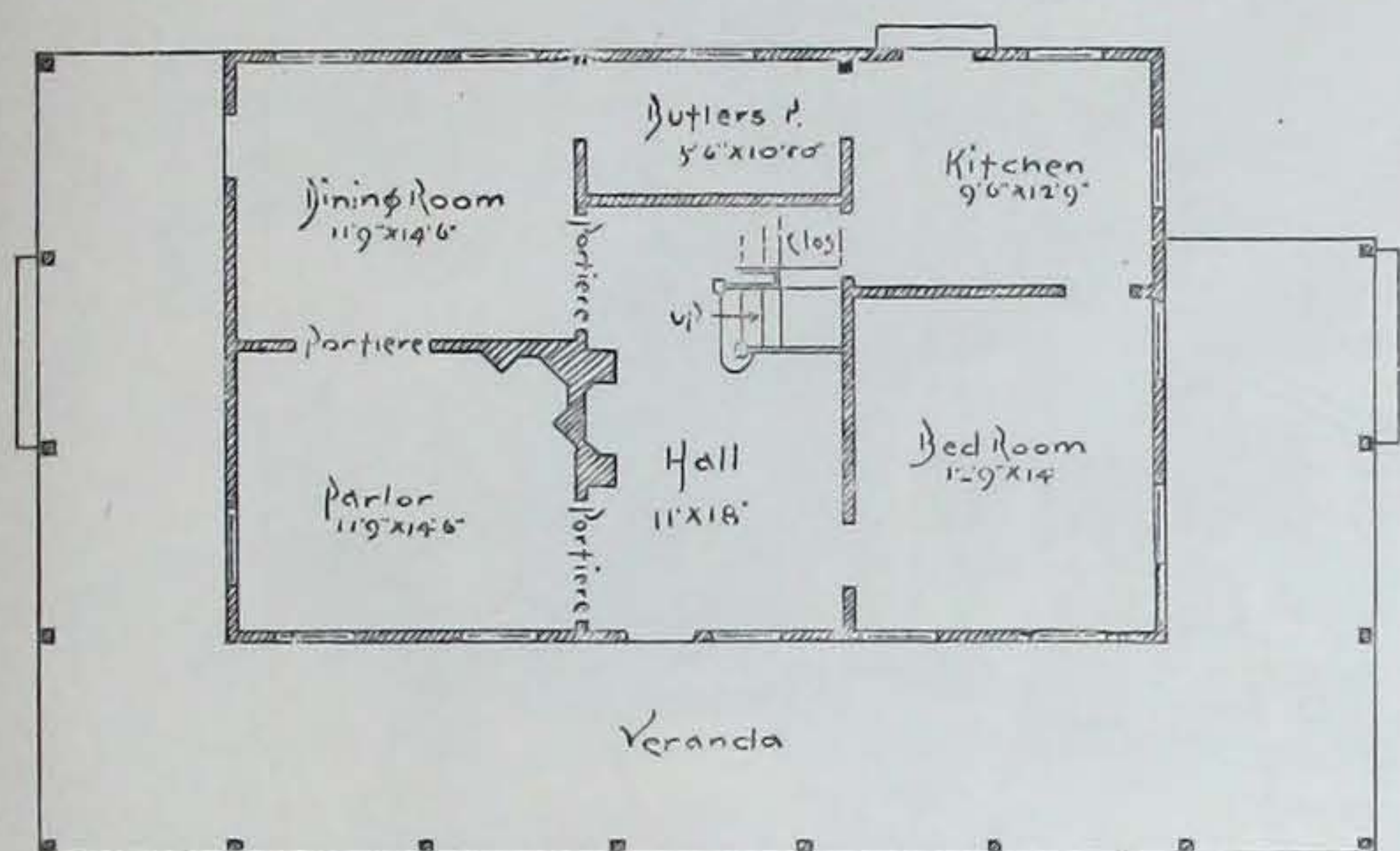
Size of the house is 40 feet front, 25 feet side: these figures do not include the verandas, which are 9 feet wide on the front and 8 feet wide elsewhere.

No cellar. No rooms finished in the attic.

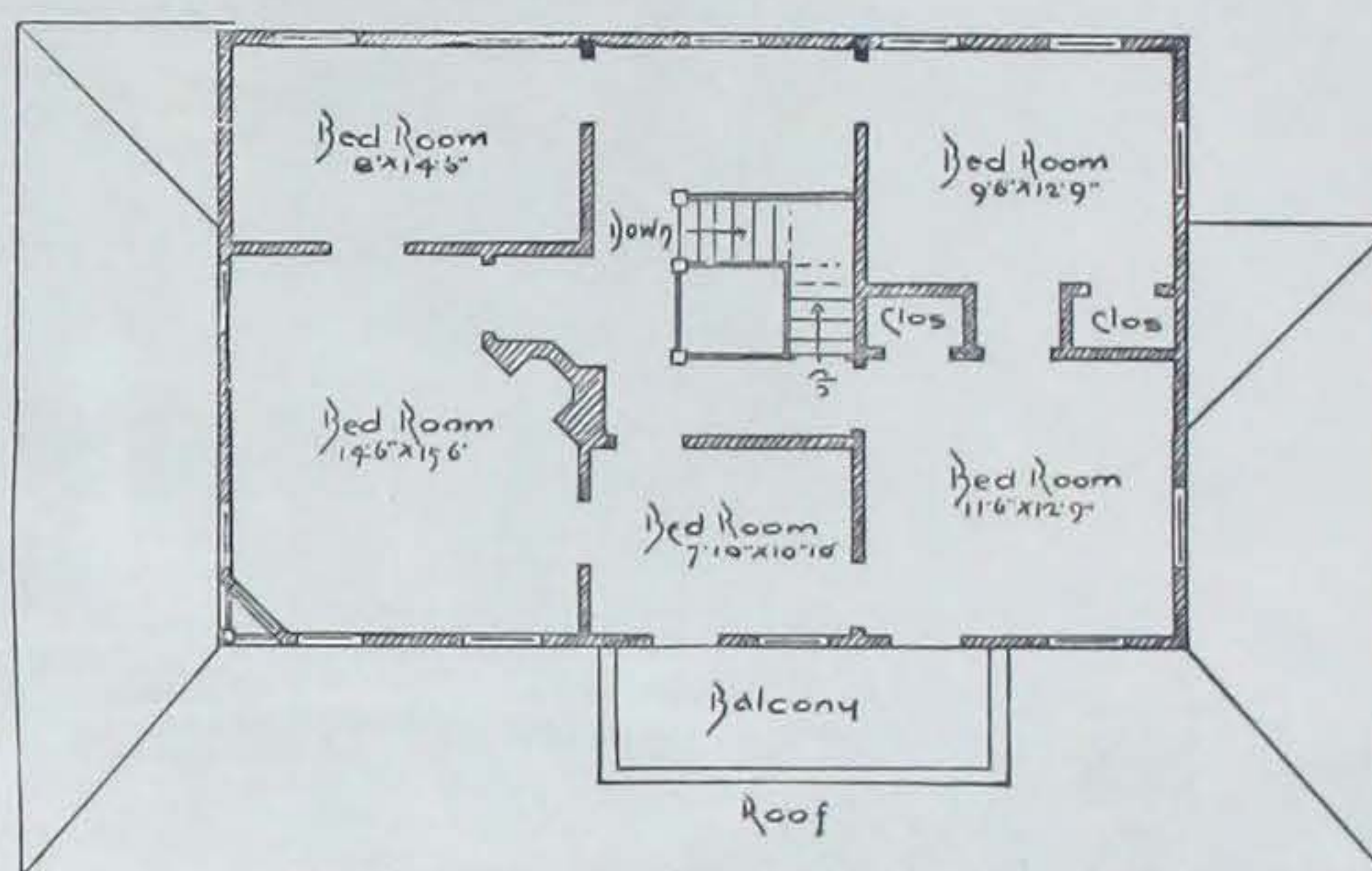
A cement chimney to be used for the kitchen.

COST: \$2,800, complete.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]



FIRST FLOOR. NO. 383



SECOND FLOOR. NO. 383

OVERMANTELS

TIMES have changed since the Middle Ages, when the court of Burgundy prescribed the number of shelves or steps one might use in his "dresoir" or sideboard, which was the remote ancestor of the modern overmantel. Five steps or shelves were allowed for the use of the queen during meals, four for princesses or duchesses, three for their children and for countesses or "grand dames," and other noble ladies had to be contented with two. These ancient sideboards were ornamented with elaborate carvings, and the shelves covered with napkins of silk or linen, the borders embroidered in openwork, or edged with point lace. Subsequently they took the shape either of etageres or of small cupboards, with drawers half way down, and rows of shelves on the top, on which ornamental plate, metal-work, Venetian glass, majolica, etc., were set out. Some of these dressers were placed against the wall; others were made movable, to permit circulation round them for the convenience of the attendants; and etiquette determined the number of stages for occasions of state and routine.

During the seventeenth and eighteenth centuries paneled cabinets of exquisite workmanship became the vogue for the arrangement of knick-knack collections, while hanging brackets, as well as the mantel-shelf and console tables, served for the open display of decorative specimens. The hanging brackets especially were a prominent item of ornamental furniture, in Louis XIV.'s time, for the support of buhl clocks, busts, small bronzes, and porcelain vases.

Cabinets with glass fronts appeared early in the eighteenth century for the purpose of display, and have stood their ground ever since, supplemented by open wall and corner etageres. The modern overmantels are but modifications of

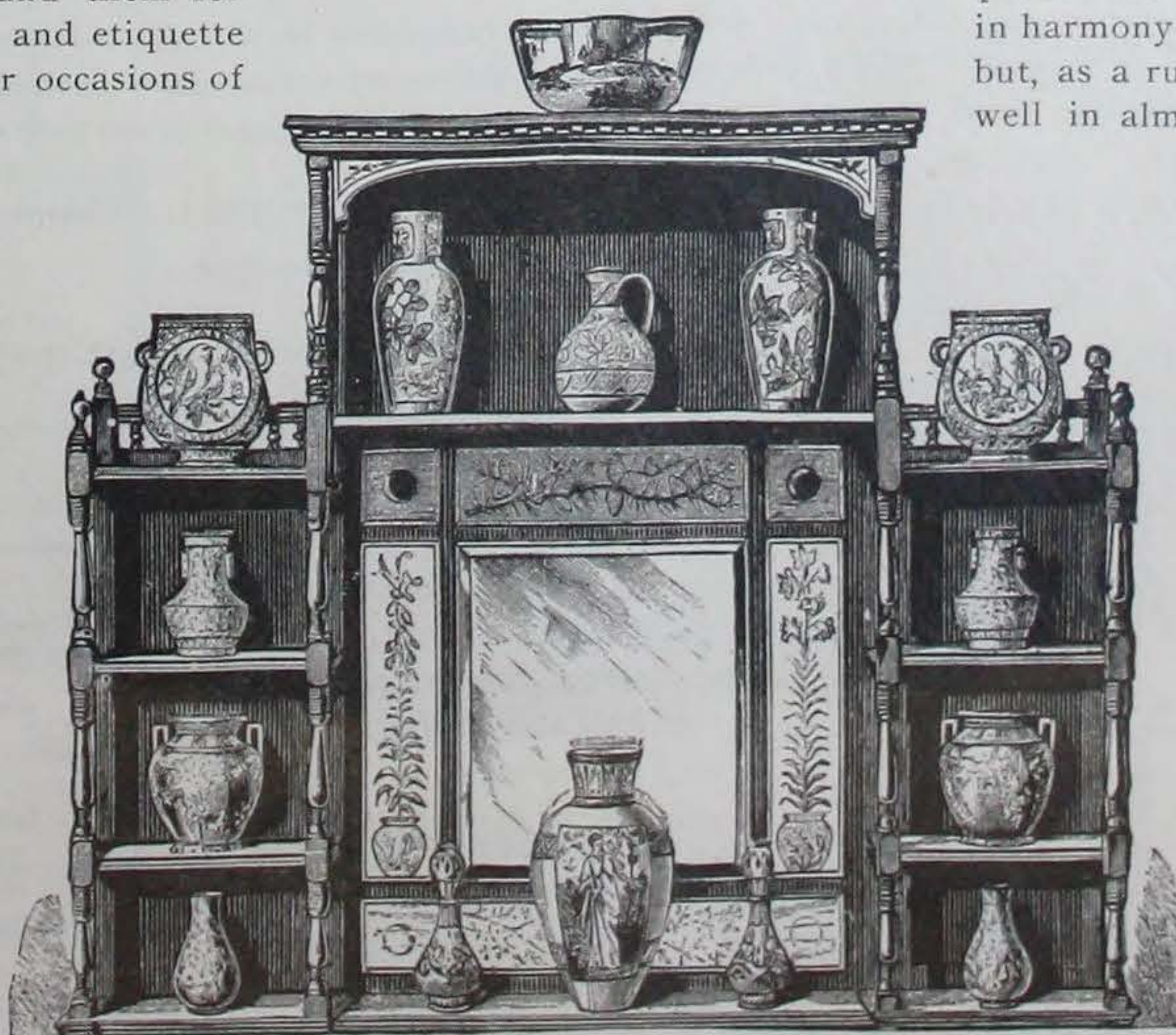
the ancient shelf-stages placed on the mantelpiece. The orthodox chimney-glass, for centuries considered as indispensable, has been, if not altogether discarded, reduced to the size of a small Venetian mirror with beveled edges, framed in, flanked or topped, in etagere fashion, by shelves and compartments. For a picturesque display of artistic porcelain, pottery and glass, of bronzes and knick-knack of any kind, overmantels are certainly the most suitable arrangement. They bring the ornaments in a convenient line with the eye, and avoid the marring effect of mirage from the glass panes of a cabinet.

A small-sized Venetian mirror with beveled edges should occupy the centre or part of the lower stage; well-chosen colored pieces of paper, leather, or velvet, silvered glass, painted tiles, or plain gilding will do duty for the paneling out of the various compartments. The color of the wood-work should be in harmony with the furniture and the wall-paper, but, as a rule, black picked out with gold looks well in almost every case.

As to the architectural character of the superstructure, straight lines are preferable to curves, and a top, slightly overhanging in the form of a cove or arch, can be introduced with advantage. The specimen of overmantels represented in our illustration may serve as a guide in this respect.

When the shape of an overmantel has been decided upon, the selection of the ornaments for its decoration has to be considered. Much of the ultimate effect depends upon the variety of colors and forms introduced, and upon their harmonious distribution over the various shelves and compartments.

Overdoors, which of late have likewise been utilized for the display of china, are constructed on the same principle as overmantels.



AN OVERMANTEL



DESIGN No. 384. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 384

SIZE OF STRUCTURE: Front, 32 ft. Side, 26 ft., 6 in.; verandas, 7 ft. on each side.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft., 6 in.; Second Story, 8 ft., 6 in.; Third Story, 8 ft., 4 in.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles; Gables, panels and shingles; Roof, shingles.

COST ; \$2,800, complete, except mantels.

will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

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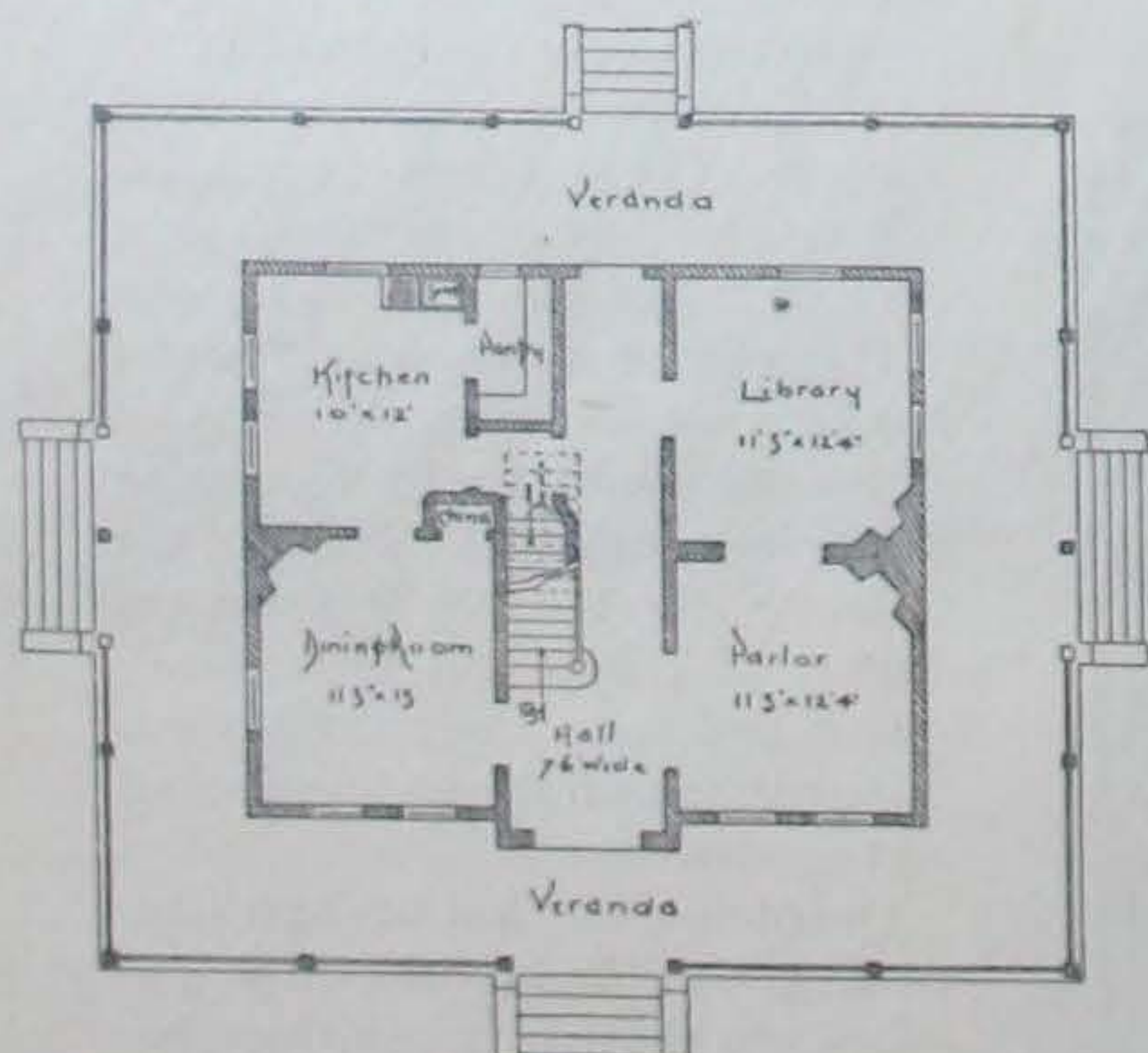
SPECIAL FEATURES.—Designed for a seaside house, as the extensive veranda indicates.

Open fire-places in the first story rooms.

Sliding doors between parlor and library.

Four bedrooms on the second floor. Three good rooms, a large hall and storage space in the attic.

Cellar under the whole house, with brick walls. For a summer residence the cellar need not be built—a saving of about \$150.

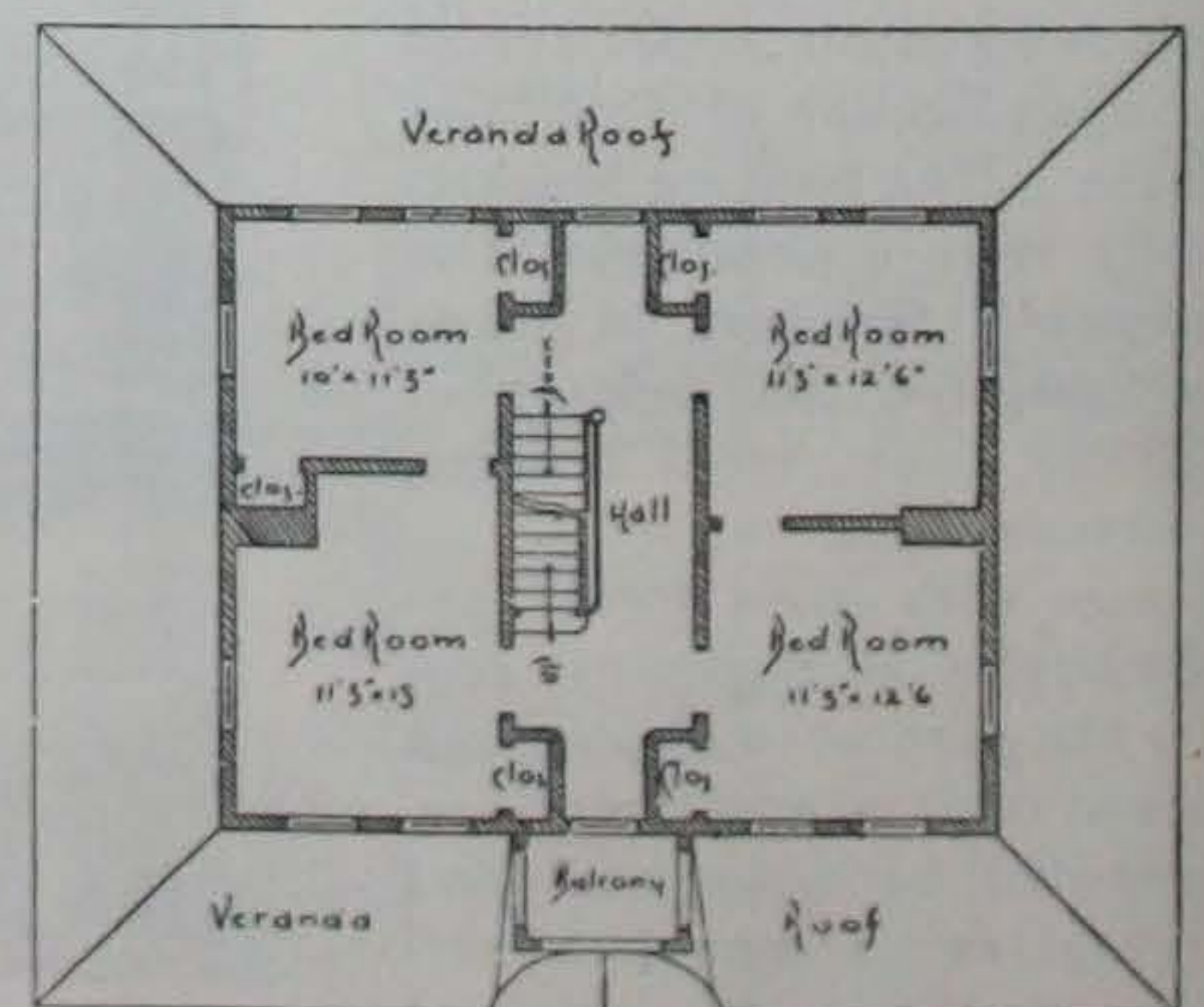


FIRST FLOOR. NO. 384

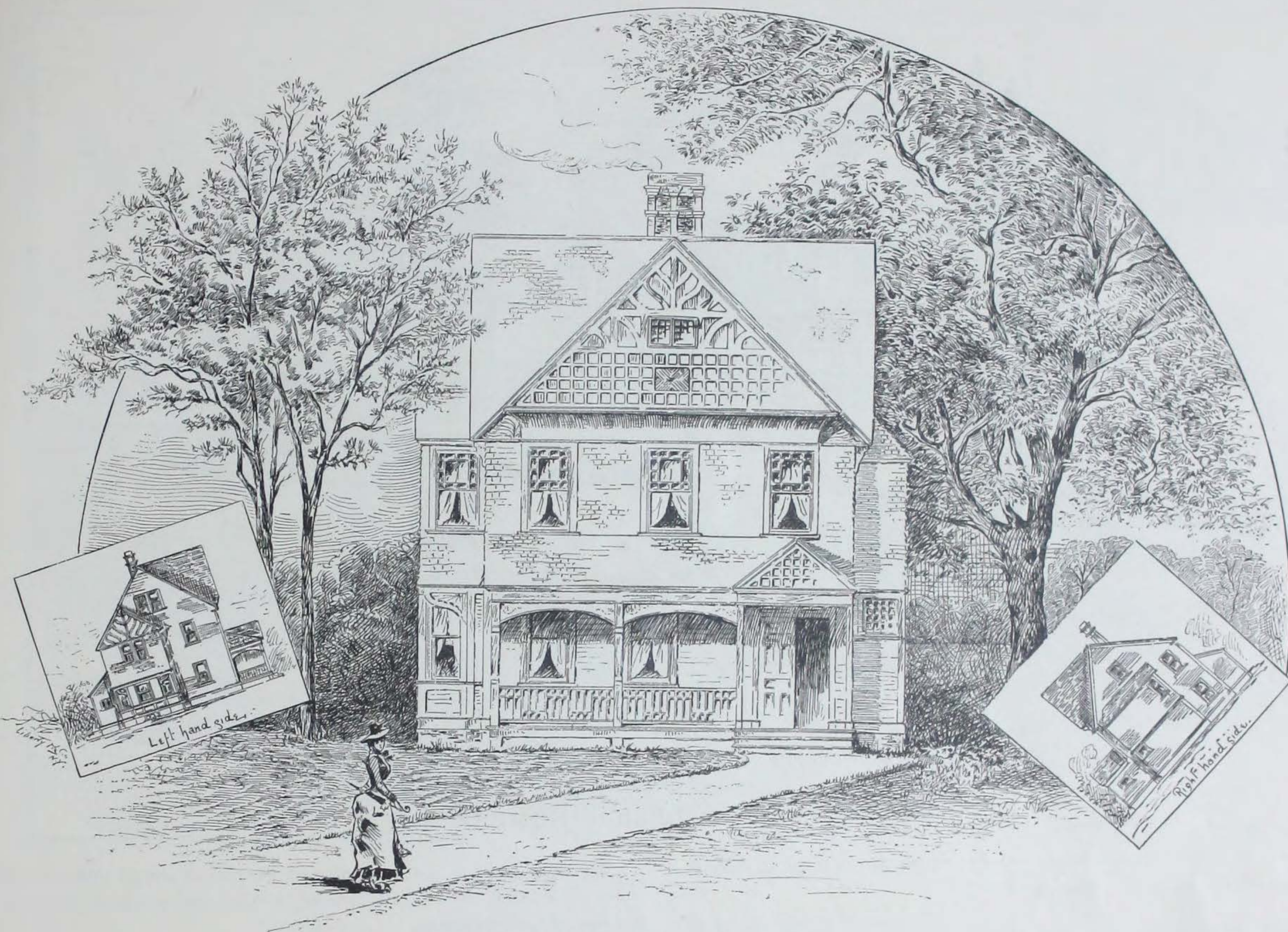
[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and at different dates the cost



SECOND FLOOR. NO. 384



DESIGN No. 385. FRONT ELEVATION

DESCRIPTION OF DESIGN NUMBER 385

SIZE OF STRUCTURE: Front, 23 ft. Extreme width, 30 ft., 6 in. Side, 40 ft., 6 in.
SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, clapboards and shingles; Roof, shingles.

COST: \$2,200, complete, except mantels and range.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—The large hall makes a good sitting-room.

Wide openings for double doors or curtains connect the hall, parlor and dining-room.

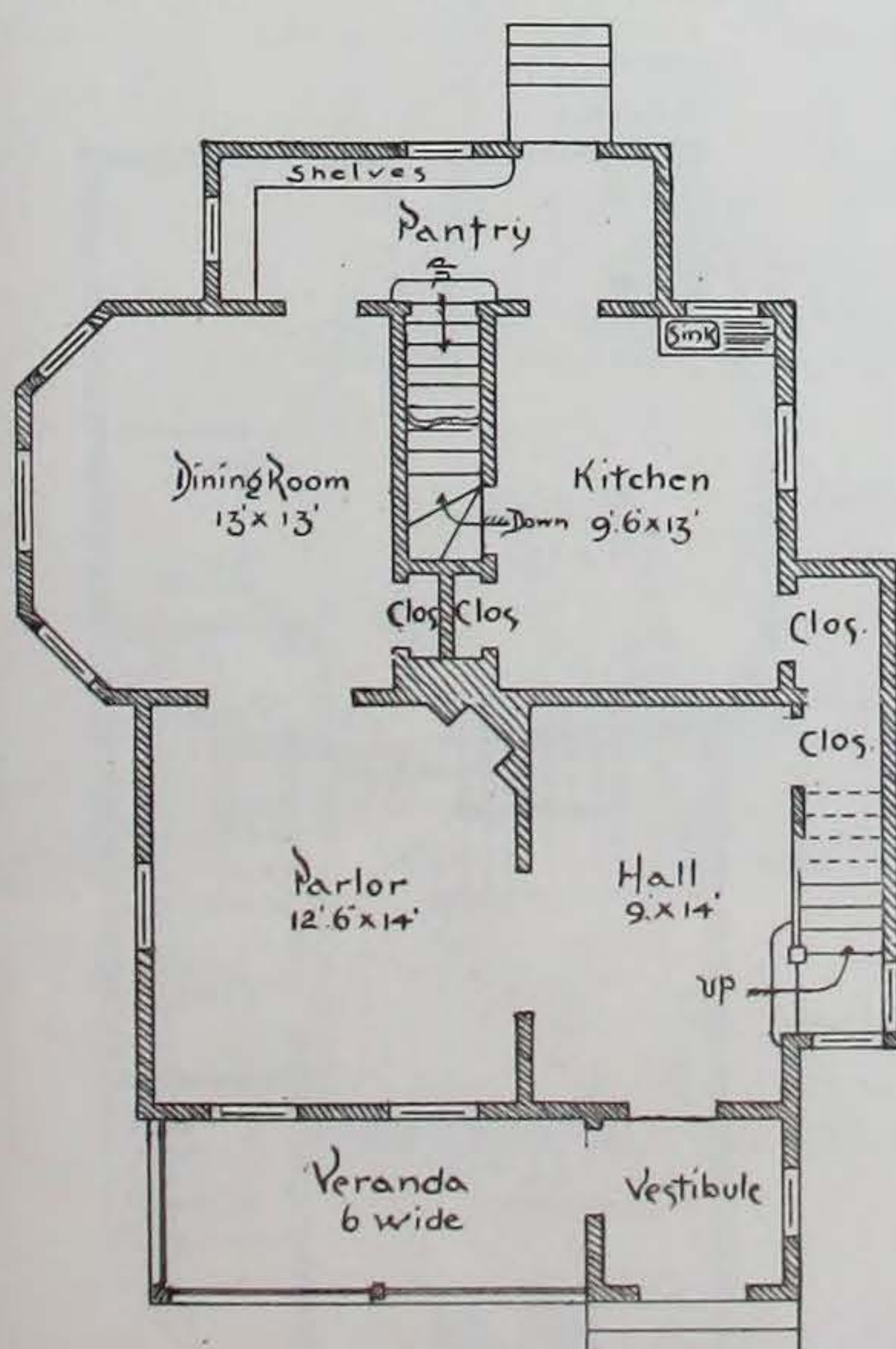
A vestibule protects the entrance from cold winds and storms.

To reach the front hall from the kitchen, the servant passes through the closets under the stairs. These closets can be fully occupied, and by keeping a very small space clear, serve as a passage, as shown by the plans.

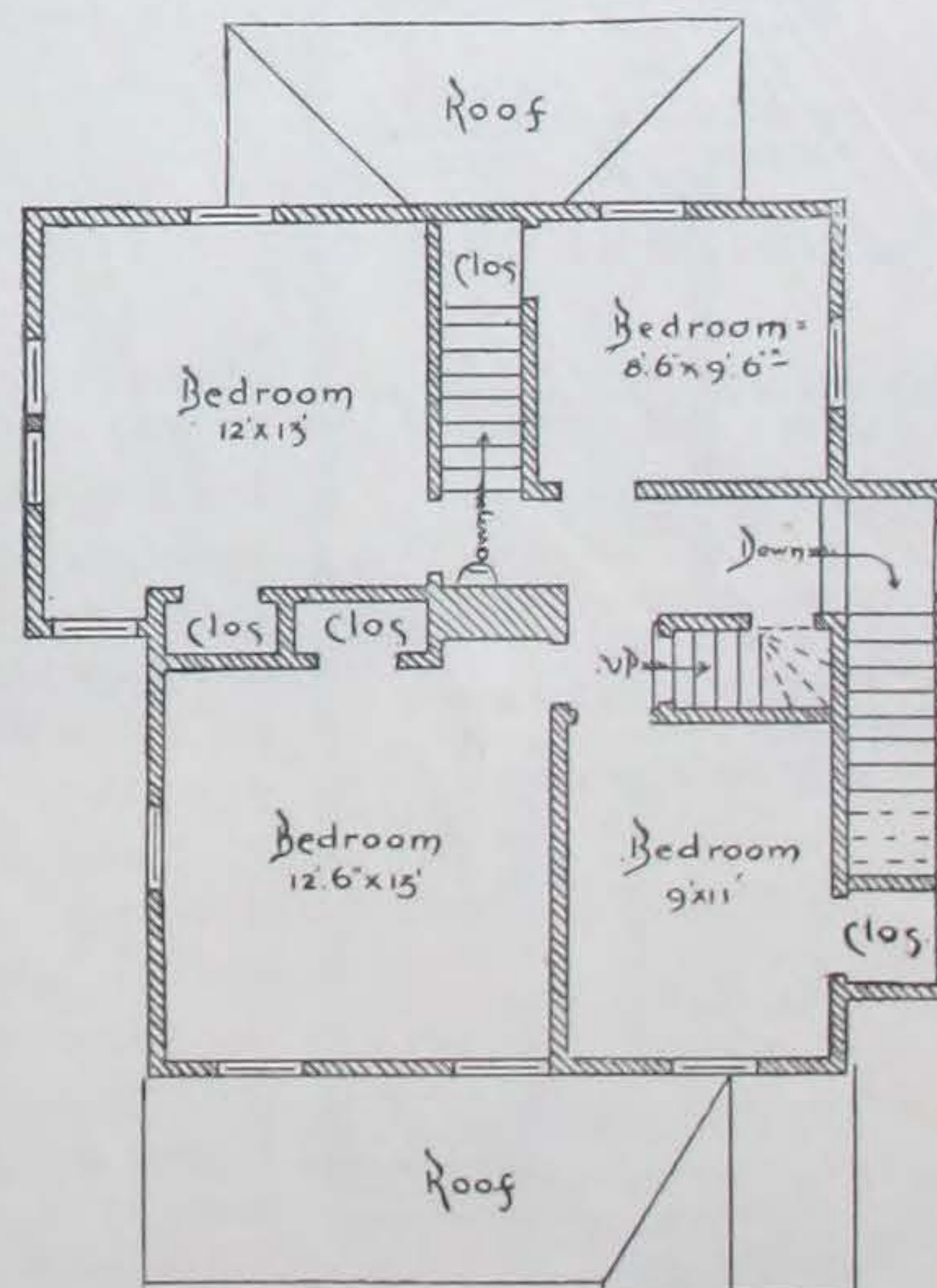
The small rear bedroom can be made a bath-room for an additional \$150 to \$200, to cover the plumbing.

One bedroom finished in the attic.

Cellar under the dining-room



FIRST FLOOR. NO. 385



SECOND FLOOR. NO. 385



DESIGN No. 386. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 386

SIZE OF STRUCTURE: Front, 20 ft.; width through dining-room and kitchen, 22 ft. Side, 40 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 9 ft.; Second Story, 8 ft.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$2,300, complete, except mantels and range.

This design can be reversed, enlarged, reduced, or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—A suitable design for a 25 ft. village lot.

The hall is practically a part of the dining-room, made so by the wide opening between them, where curtains can be hung. When an extra large table is required at any time, a part of the hall can be brought into service.

The dining-room alcove can be used as a conservatory, if the house is so located that it will get the sunlight.

The front hall can be reached directly from the kitchen.

A door is not required between the hall and the parlor; a curtain is preferable.

Open fire-places in the parlor and dining-room.

The three steps down to the platform of the cellar stairs bring us down to within one step of the grade level outside, so that a stoop is not necessary to the side entrance.

Good storage room in the attic.

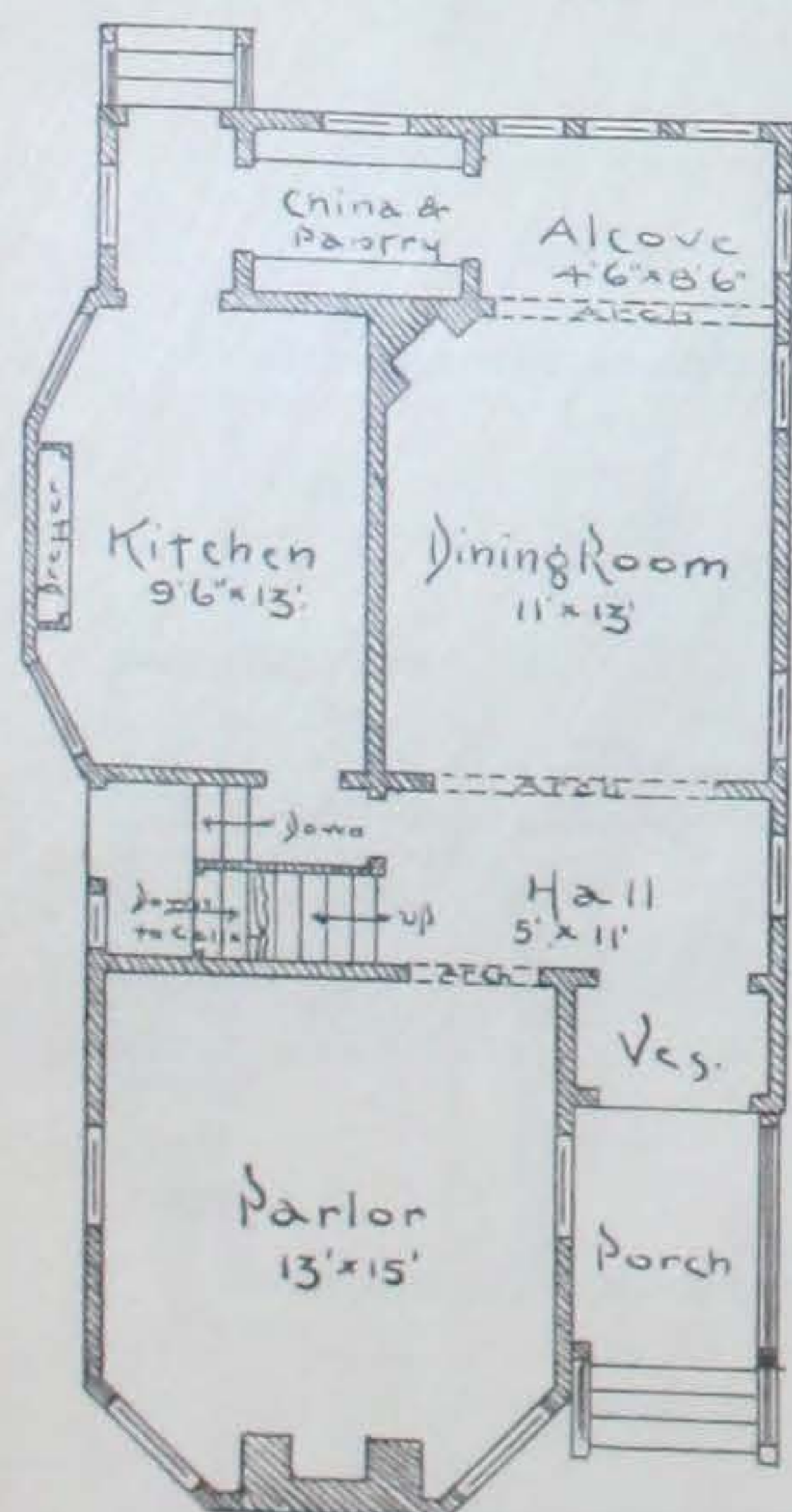
Cellar under the hall, dining-room and kitchen.

[See page 219 for information about details, specifications, bill of quantities, and working plans of this design.]

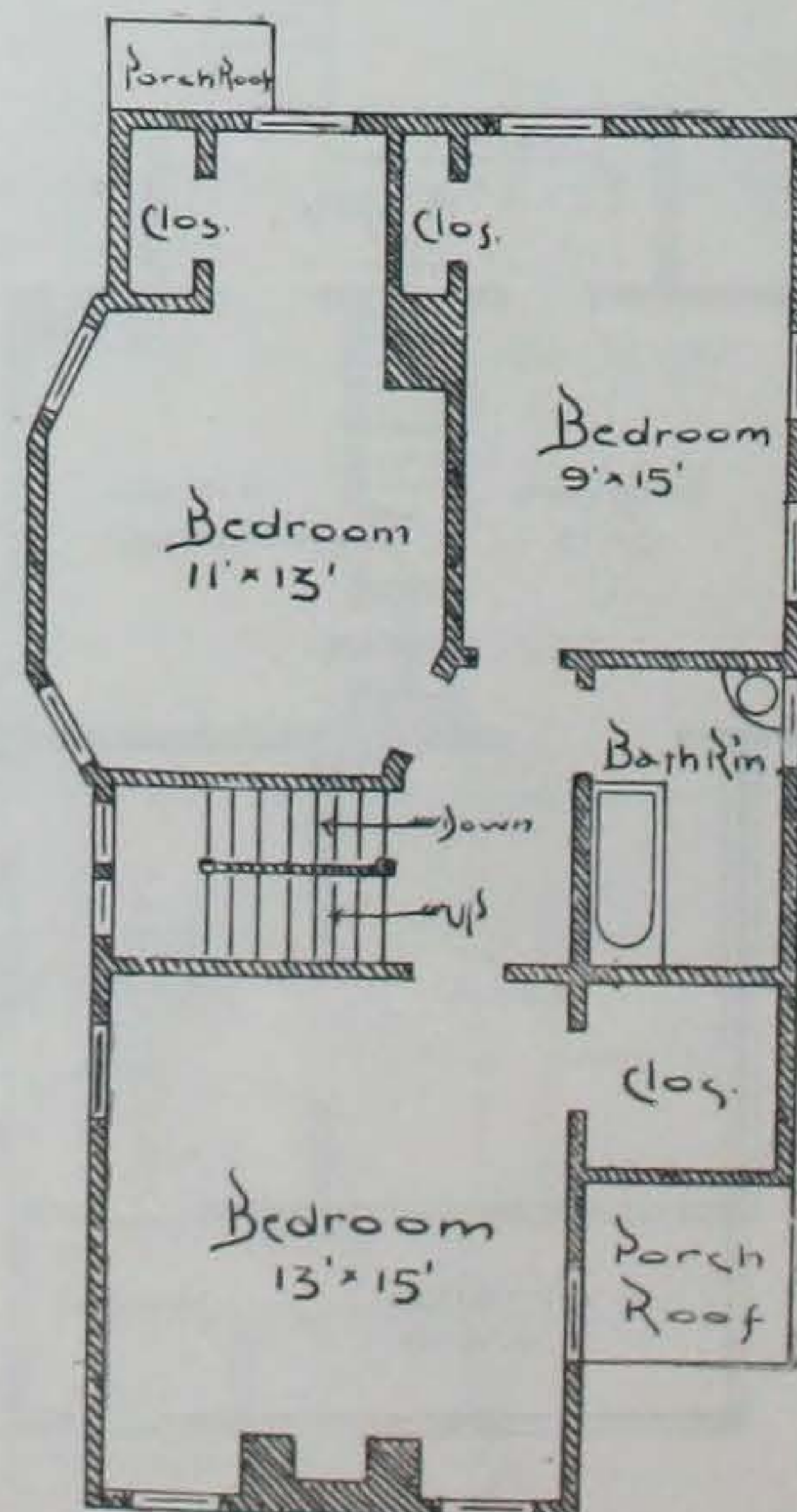
NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

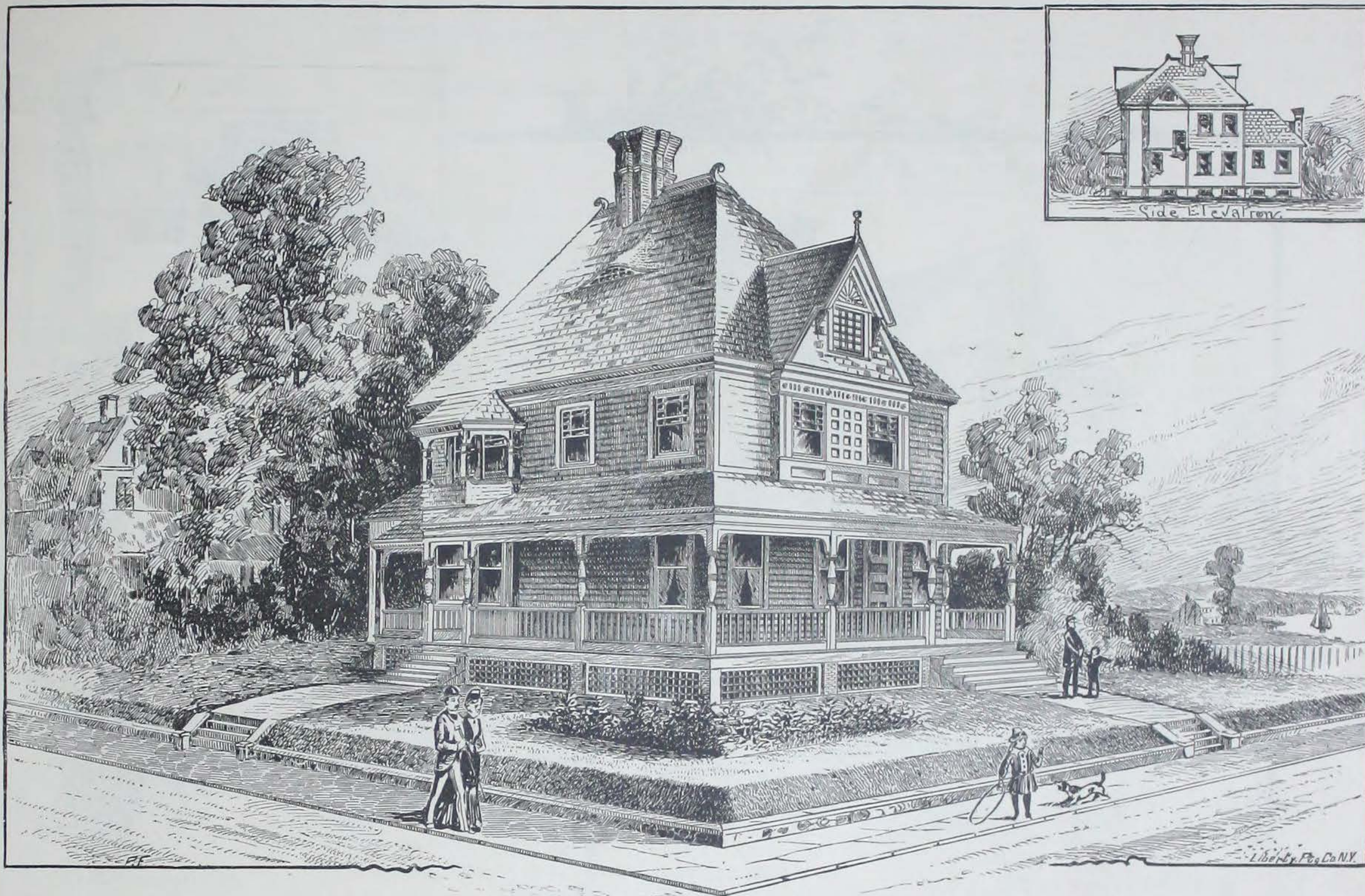
Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.



FIRST FLOOR, NO. 386



SECOND FLOOR, NO. 386



DESIGN No. 387. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 387

SIZE OF STRUCTURE: Front, 24 ft. Side, 48 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft.

MATERIALS:
Foundation, stone;
First Story, clap-
boards; Second
Story, clapboards
and shingles; Roof,
shingles.

COST: \$3,000,
complete, except
mantels, range and
furnace.

[See page 219 for
information about
details, specifica-
tions, bill of quanti-
ties and working
plans of this de-
sign.]

NOTES

The cost is figured
from prices of material
and labor in the neigh-
borhood of New York
City, September, 1886.
In other localities and
at different dates the
cost will be somewhat

modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings and careful directions for their execution are given in our Specifications.

This design can be re-
versed, enlarged, reduced
or altered to suit special
wants.

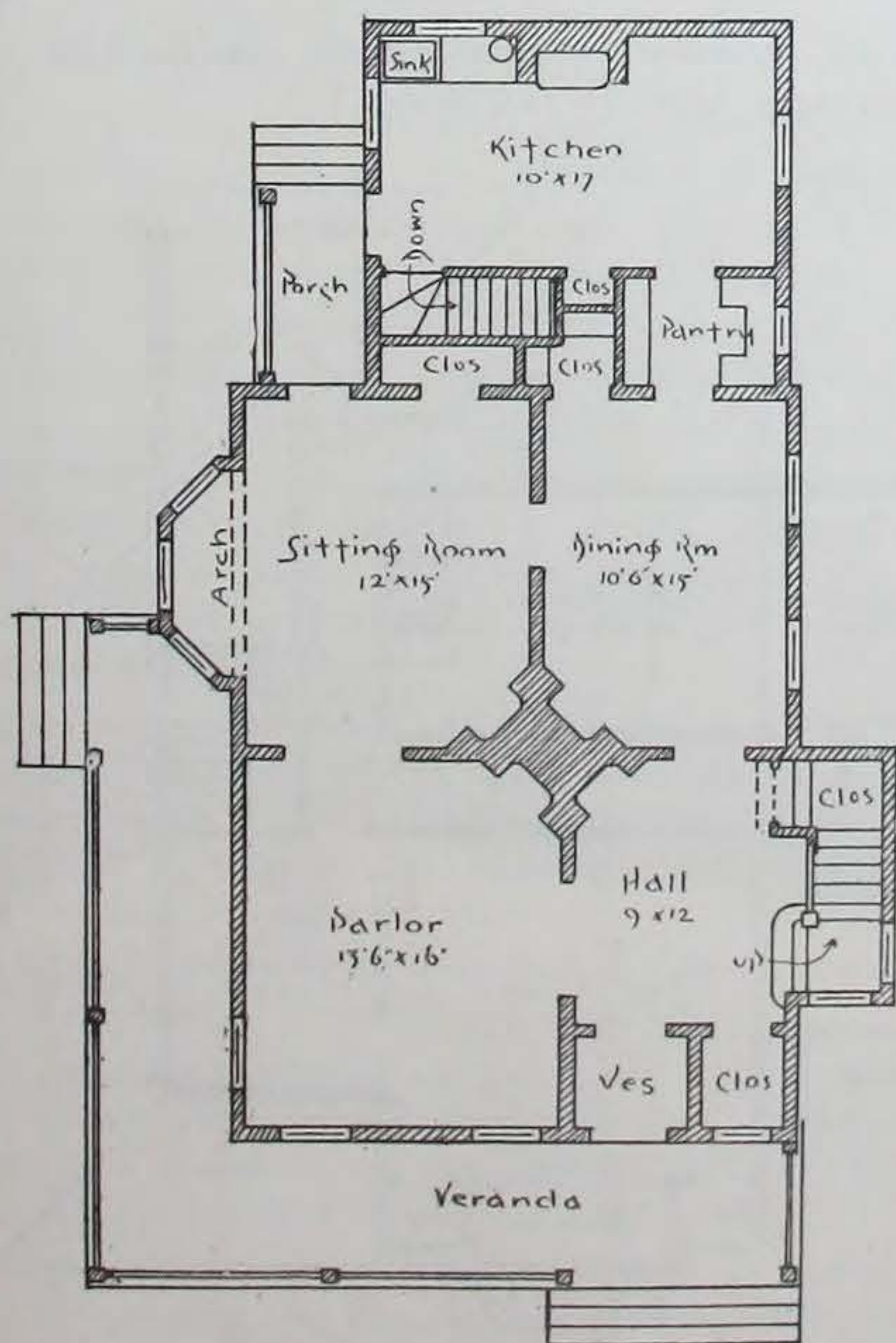
The specifications can
be altered, also, to em-
ploy different materials
that may be best or
cheapest in any locality.

**SPECIAL FEAT-
URES:** Large veranda
and a convenient ar-
rangement of rooms.

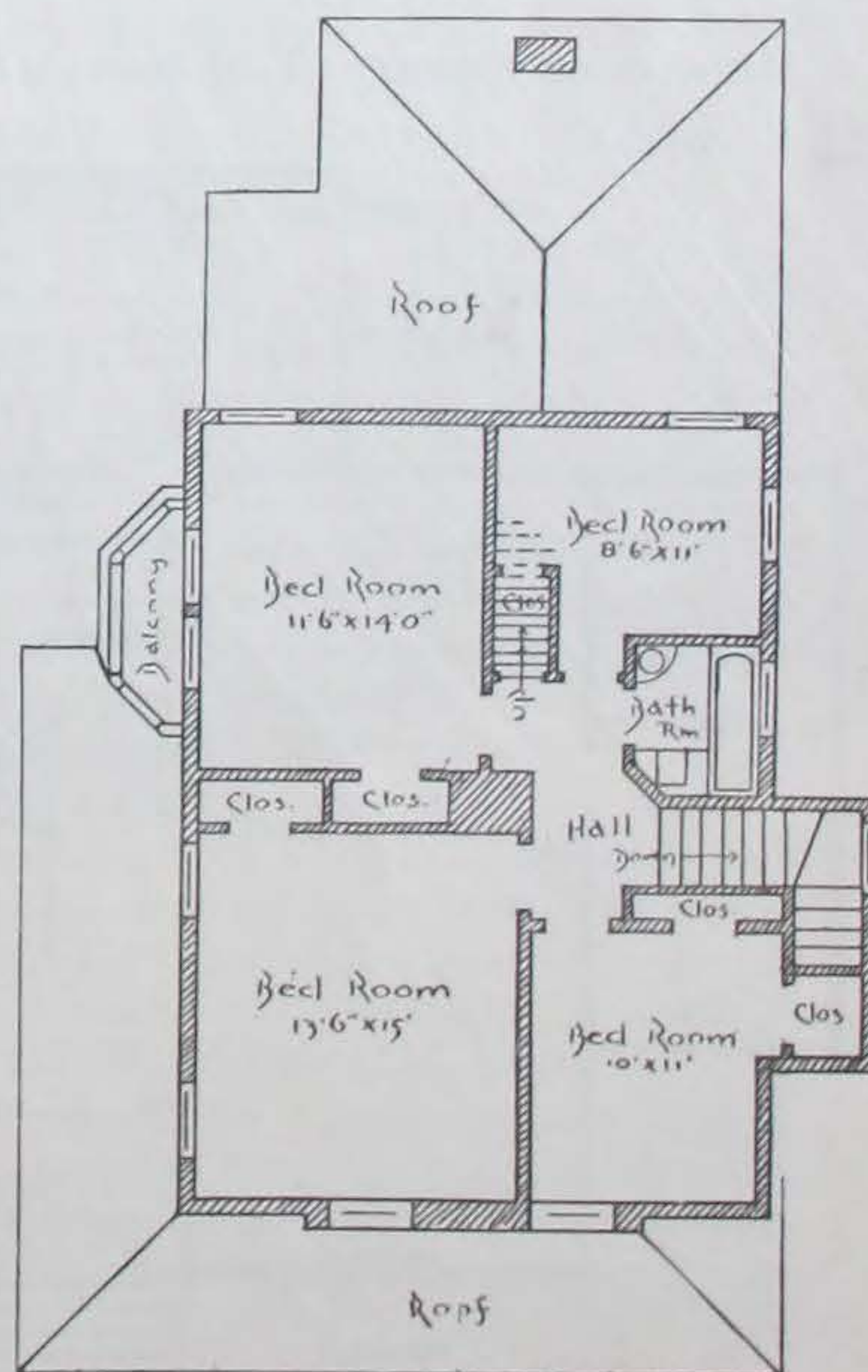
Open fire-places in
all rooms of first story.

The attic is floored,
but not finished. Cel-
lar under the whole
house.

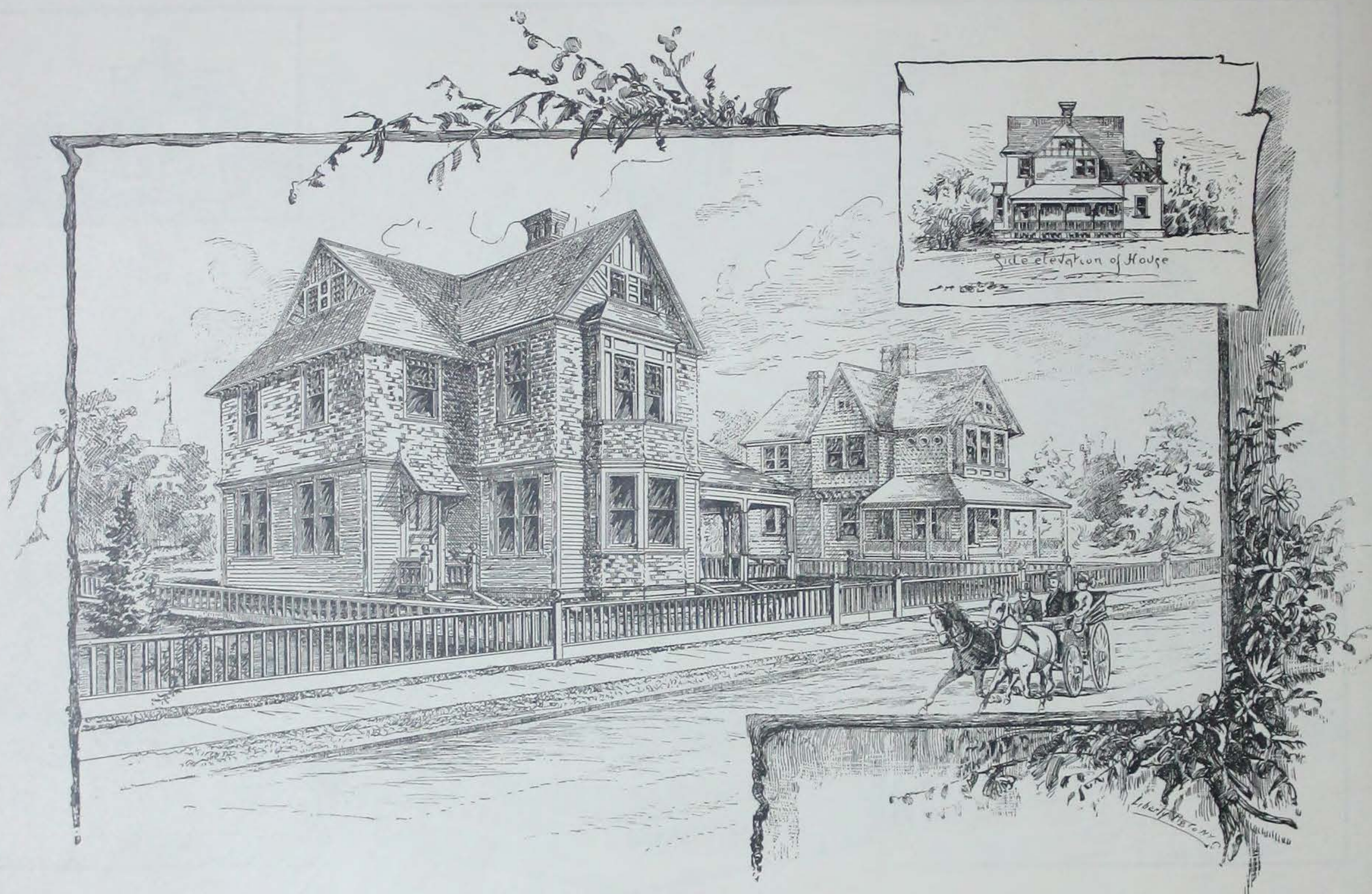
Heater pipes and
registers are provided.



FIRST FLOOR. NO. 387



SECOND FLOOR. NO. 387



DESIGN No. 388. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 388

SIZE OF STRUCTURE: Front, 44 ft., including veranda. Side, 46 ft., 6 in.

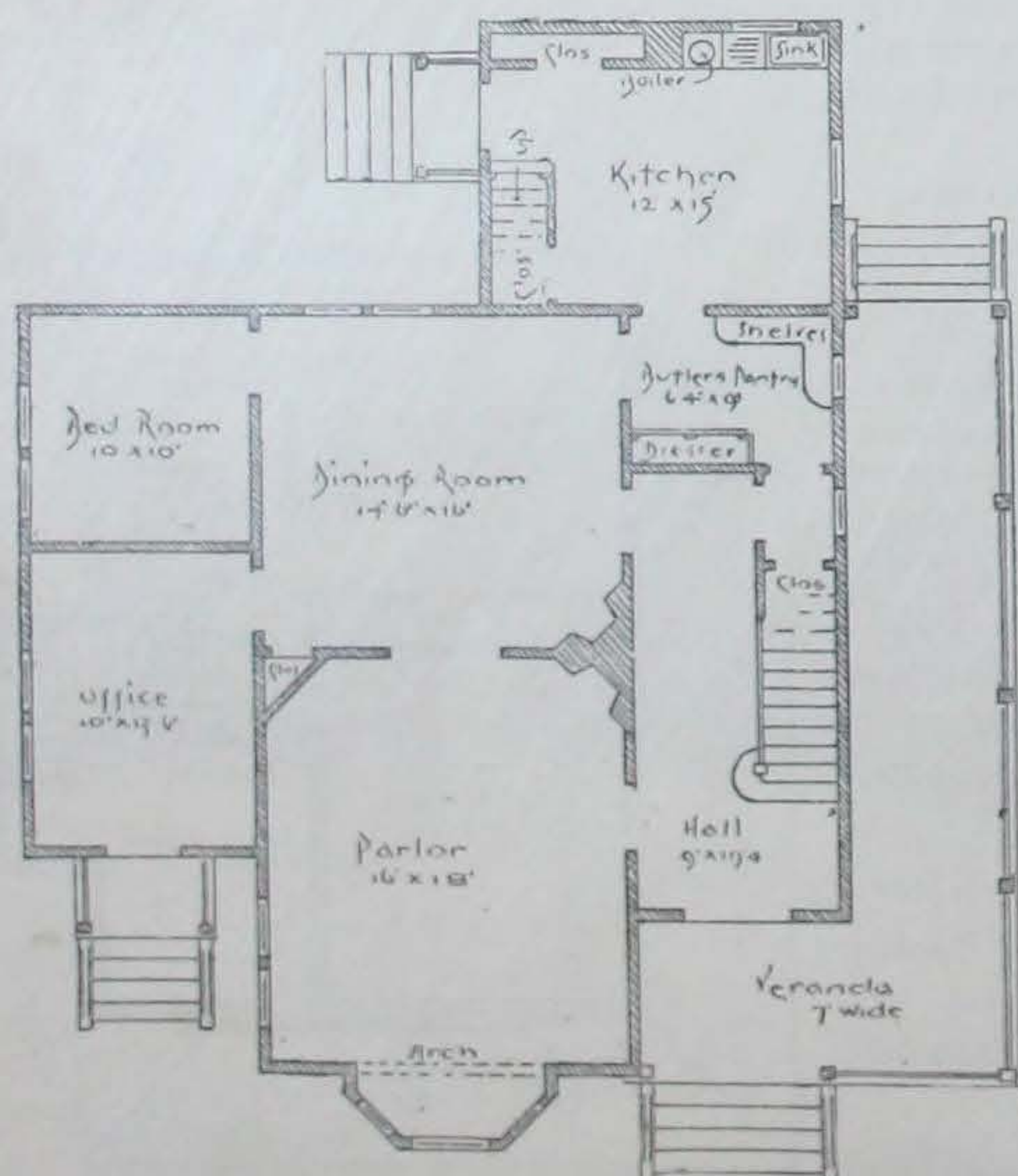
SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 11 ft.; Second Story, 10 ft.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Roof, shingles.

COST: \$3,800, complete, except mantels and kitchen range.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]



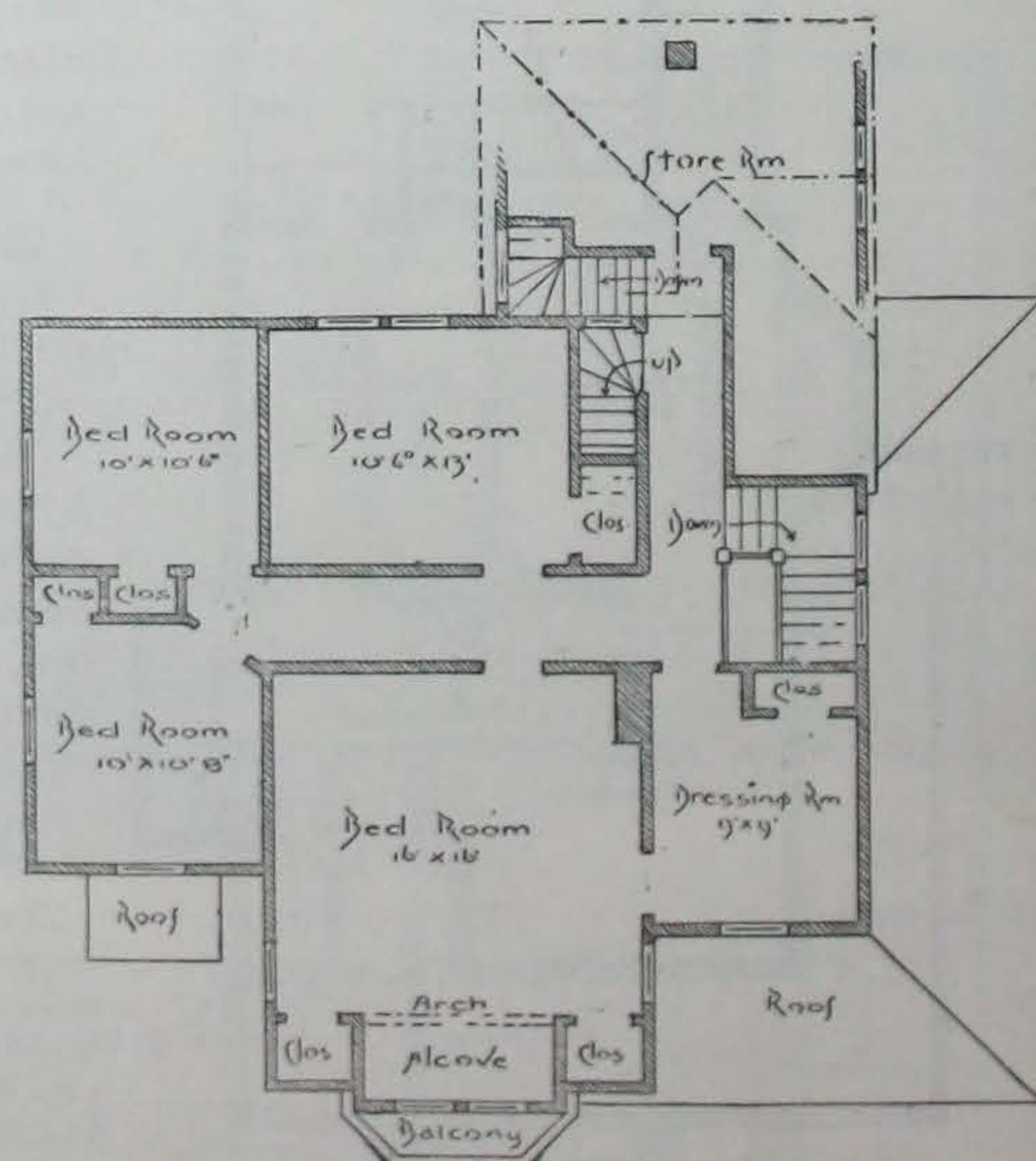
FIRST FLOOR. NO. 388

SPECIAL FEATURES.—Designed for a doctor's house and office. The bedroom back of office can be made a private office and be connected with the front office.

Three rooms are finished in the attic.

If a bath-room is desired it can be put over kitchen where "store-room" is marked on the plan; the additional cost of the plumbing for the same would be about \$150.

No cellar, but the walls are carried under the whole house. Extra cost of cellar under the whole house about \$150.

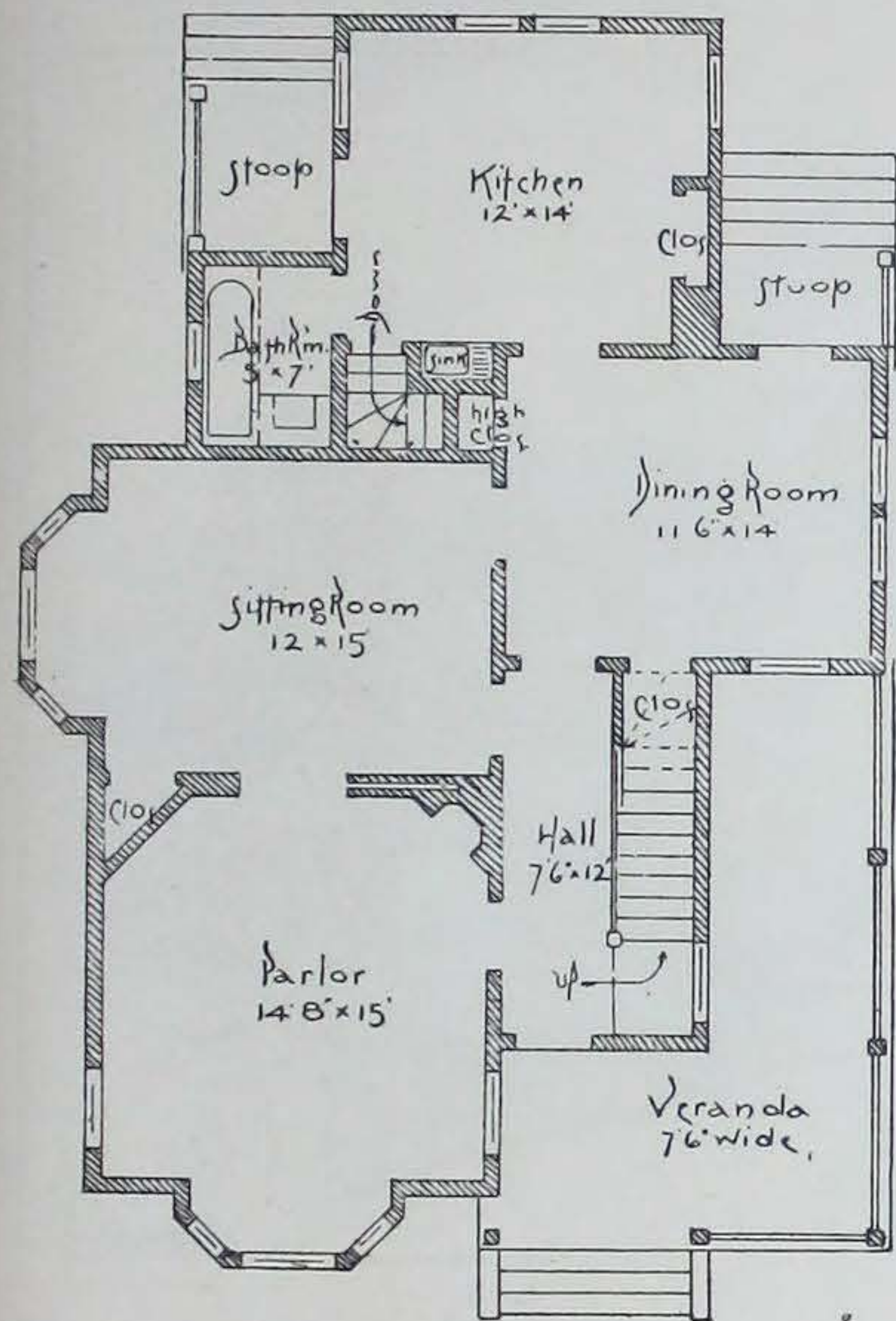


SECOND FLOOR. NO. 388

DESCRIPTION OF DESIGN NUMBER 389

SIZE OF STRUCTURE: Front, 30 ft., 6 in., including veranda.
Side, 47 ft., 6 in., including front bay window.

SIZE OF ROOMS: See floor plans.



FIRST FLOOR. NO. 389

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft., 6 in.; Second Story, 8 ft., 6 in.; Attic Story, 7 ft., 6 in.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Roof, shingles.

COST: \$2,500, complete, except mantels and kitchen range.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

NOTE

The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

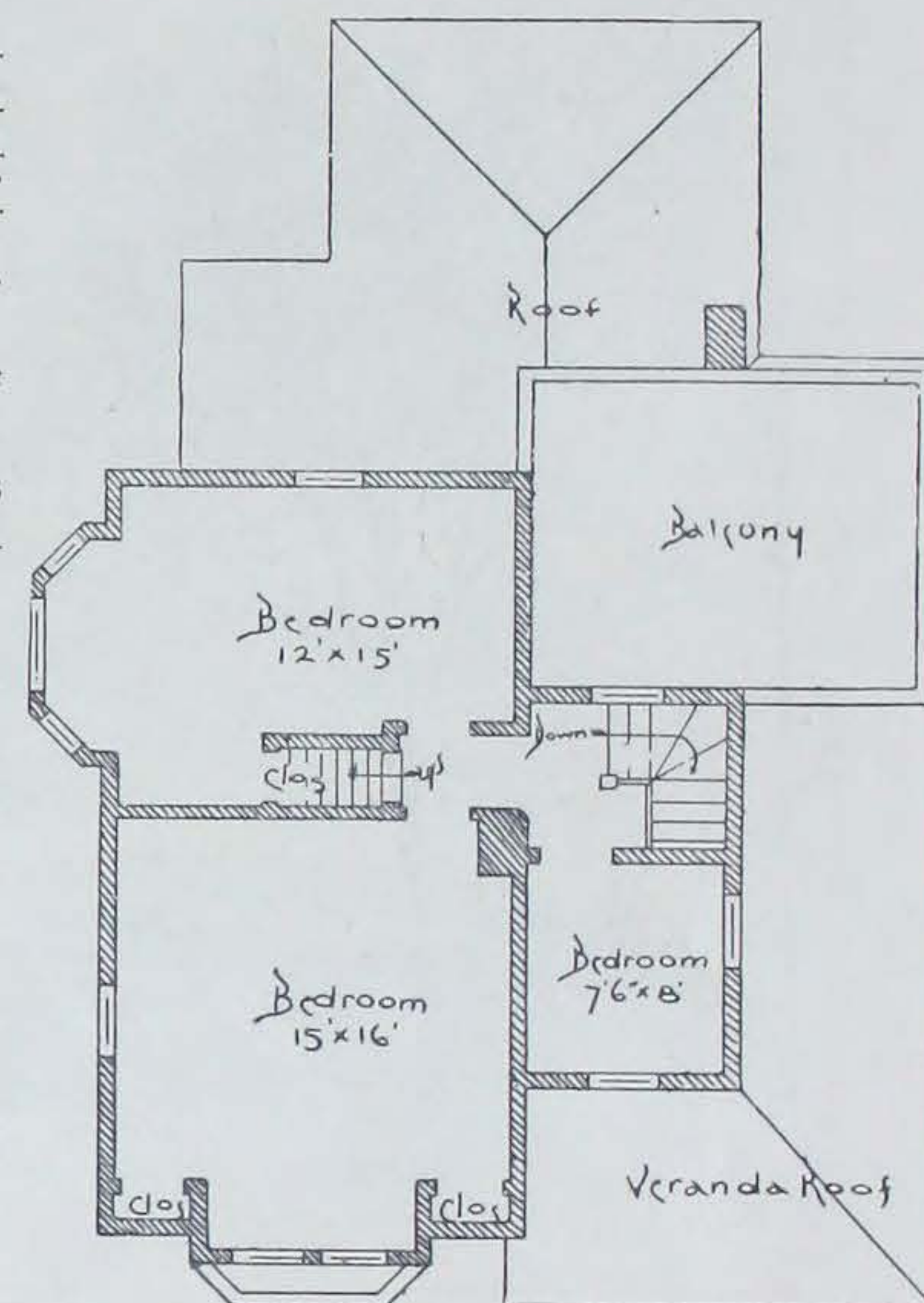
SPECIAL FEATURES.—A modification of the preceding design, the exterior being much the same.

An open fire-place in the parlor. A 4 ft. sliding door connects the parlor and sitting-room.

The dining-room part is one story high and has a flat roof, which forms a large open balcony.

Two bedrooms are finished in the attic and there is storage room besides.

Cellar under the kitchen only.



SECOND FLOOR. NO. 389

FOR THE AMATEUR HOUSE PAINTER.

FOR one who wishes to do his own painting the best plan, in most cases, is to buy ready mixed paints, of which there are a number of good brands in the market; he can select his colors from the sample cards furnished or order them as specified by the architects. In this way he obtains the colors desired and avoids the difficulties of mixing.

If he prefers to mix the colors, thereby effecting a saving of money, he can have the pigments ground to the desired tints, then by adding the oil (raw linseed is the best) bring the paints to the proper consistency for using.

White lead is good to lighten any color, and also makes the best body for white paint and some other colors.

When using dry lampblack, saturate it with spirits of turpentine and there will be no difficulty in mixing it with oil afterwards; no more turpentine should be used than is necessary to make a paste, as turpentine is bad for outside work. A small amount of lampblack is good to set the olive greens and make them durable.

It is important that the work to be painted be perfectly clean and free from grease, oil or tar spots. All knots should be covered with a coat of strong shellac varnish before priming. If the work is new let the priming stand a week or two before laying on the second coat.

The following will be found useful in computing the amount of paint required:

QUANTITIES REQUIRED to paint 100 square yards: For priming, if tinted white lead is used, there will be required 20 pounds of lead and 5 quarts of raw linseed oil. For second coat 20 pounds of lead and one gallon of oil.

If three-coat work is intended, the amount of material required for priming and completing the work will average 50 pounds of lead and 2½ gallons of oil to cover 100 square yards, or about ½

pound lead per square yard. As painting is sometimes measured by the "square" of 10 x 10 feet (or 100 square feet), we give the following rule for computing the quantities required, viz.: 5 pounds of lead and one quart of oil to the "square" for three-coat work.

When paint is already mixed and ready for the brush there is required one gallon per coat for each 25 square yards.

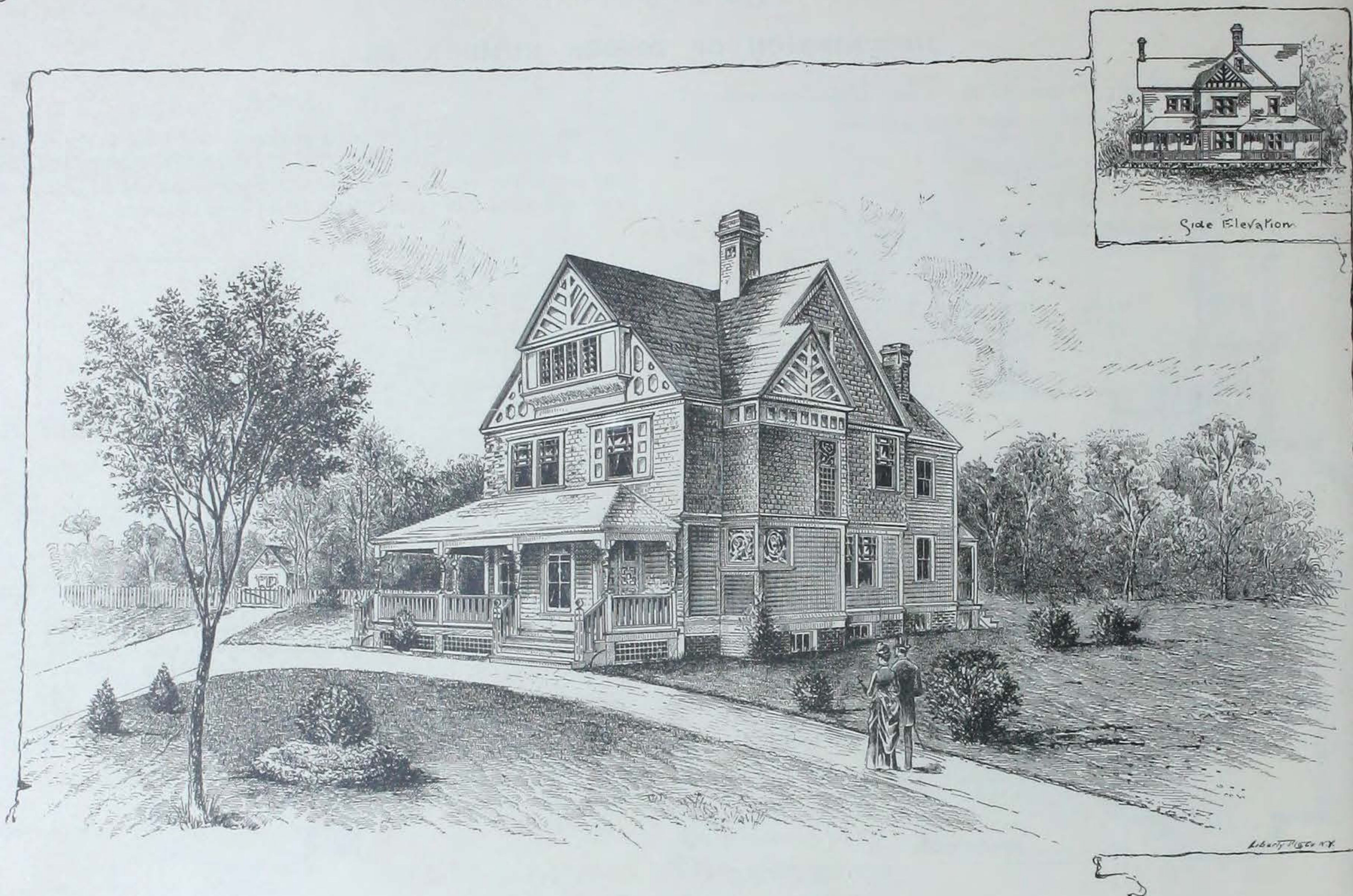
Putty for stopping nail holes, &c., ½ pound to the "square," or 4 to 5 pounds for each 100 yards.

In regard to the BRUSHES REQUIRED: It is economy to have enough brushes so that there will be one for each color, besides a few sash tools with which to touch up and for use in small spaces and corners. It is a waste of time and an annoyance to be obliged to wash or rub out brushes in changing from one color to another. No brush should be washed with soap and water; it destroys its elasticity and usefulness. If water is to be used in cleaning a brush, let it be well mixed with ammonia and used as warm as is comfortable to the touch. If the brushes are washed in turpentine or benzine, they should be cleansed from same and laid out for a little time to allow the spirits to evaporate before painting is resumed. The turpentine endangers the durability of the paint.

One who does his own painting is not likely to be stinted in time, and consequently will not need to spend money for such large brushes as painters generally use. Brushes made with a selected quality of Russia bristles and bound with wire are considered the best, though there are very good brushes bound with cord or twine.

A very good kind of flat brush, like a kalsomine or whitewash brush can be obtained, that answers quite well for painting or oiling shingles or large surfaces; they are cheap and quite substantial, being bound in a patent rubber composition, and need no extra binding or "bridling."

For laying on the body colors a round brush, not less than 0000 in size, should be used, one for each color, also one for the trim.



DESIGN No. 390. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 390

SIZE OF STRUCTURE: Front, 26 ft., 9 in.; extreme width, including veranda and staircase projection, 37 ft., 6 in. Side, 48 ft., 6 in., not including front veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft.; Attic Story, 8 ft.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Roof, shingles.

COST: \$3,500, complete, except mantels, range and heater.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and at different dates the cost will

be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Open fire-places in hall, library and dining-room; false chimney breast in the parlor.

The openings between the rooms of first story are intended for curtains, but doors can be hung if desired.

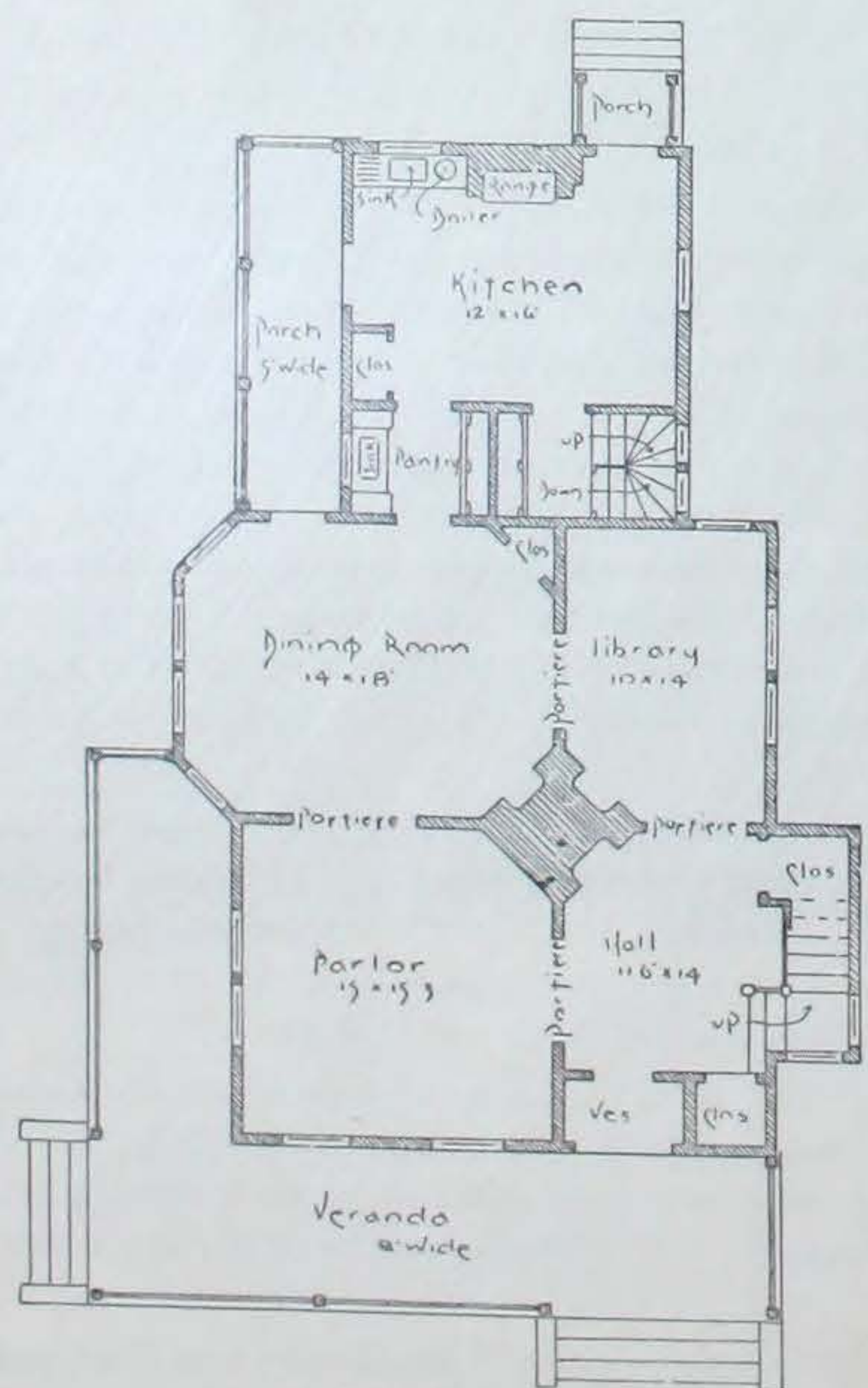
The parlor windows have sliding sash and are carried to the floor. A door opens from dining-room to rear porch.

Stained glass in the hall windows.

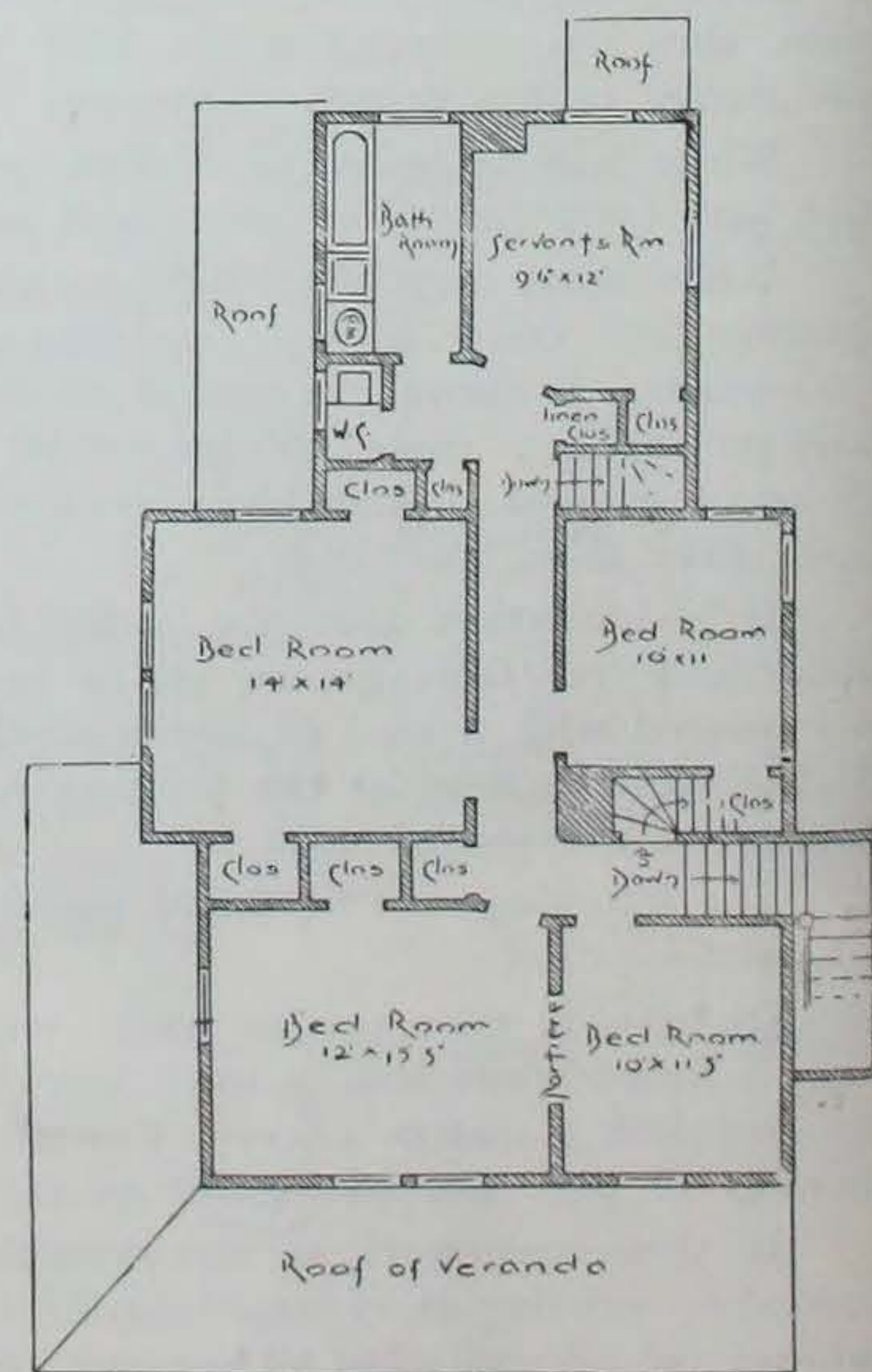
Cellar under the whole house; laundry under the kitchen.

Heater pipes and registers are provided.

The attic is not finished.



FIRST FLOOR, NO. 390



SECOND FLOOR, NO. 390



DESIGN No. 391. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 391

SIZE OF STRUCTURE: Front, 26 ft., 6 in.; extreme width, 50 ft.
Side 39 ft., 6 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 8 in.; First Story, 9 ft., 6 in.;
Second Story, 8 feet; Third Story, 8 ft.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

SPECIAL FEATURES.—The staircase hall affords access to the front door from the kitchen, without passing through a room.

The entrance hall is large enough to make a good reception-room.

Sliding doors connect the hall and parlor, and the parlor and dining-room.

Open fire-places in the parlor and the dining-room.

Large pantry and butler's pantry.

Heater pipes and registers are provided. Ash pits in the cellar into which the contents of the grates can be dumped through a flue.

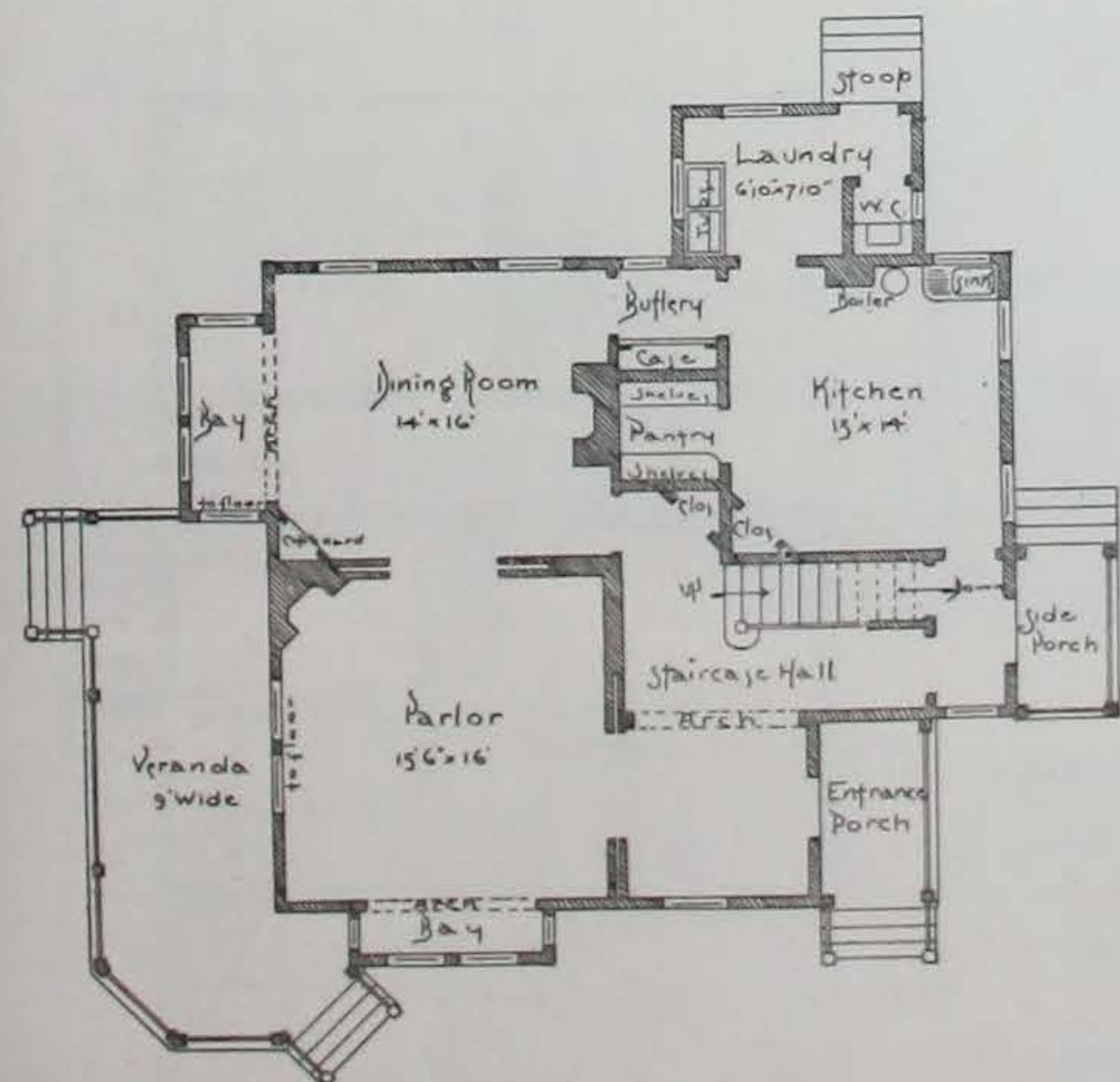
Two good bedrooms and a large store-room in the attic.

Cellar under the whole house.

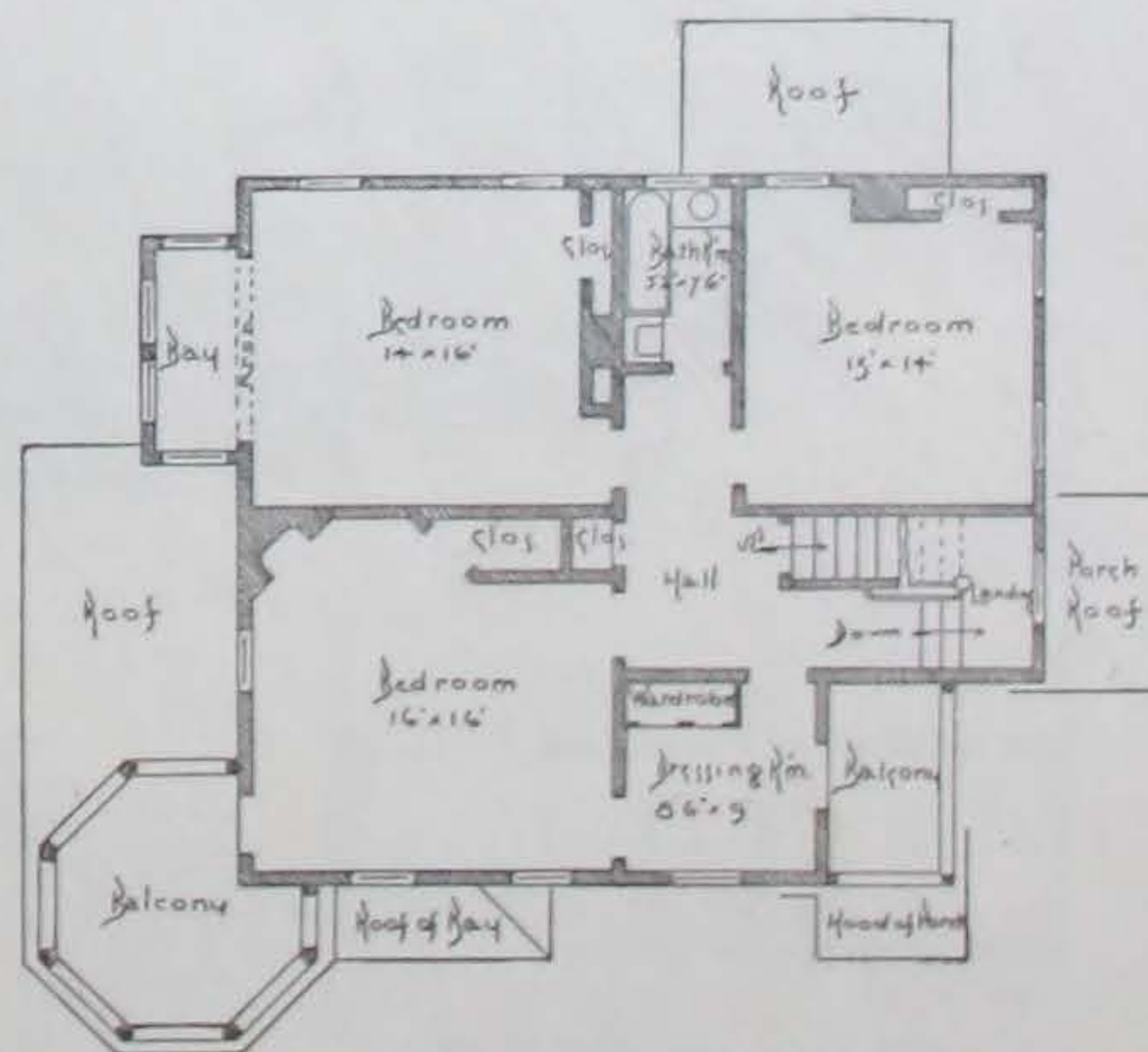
The separate laundry and servants' W. C. are desirable features.

COST:
\$3,400, complete, except mantels, range and heater

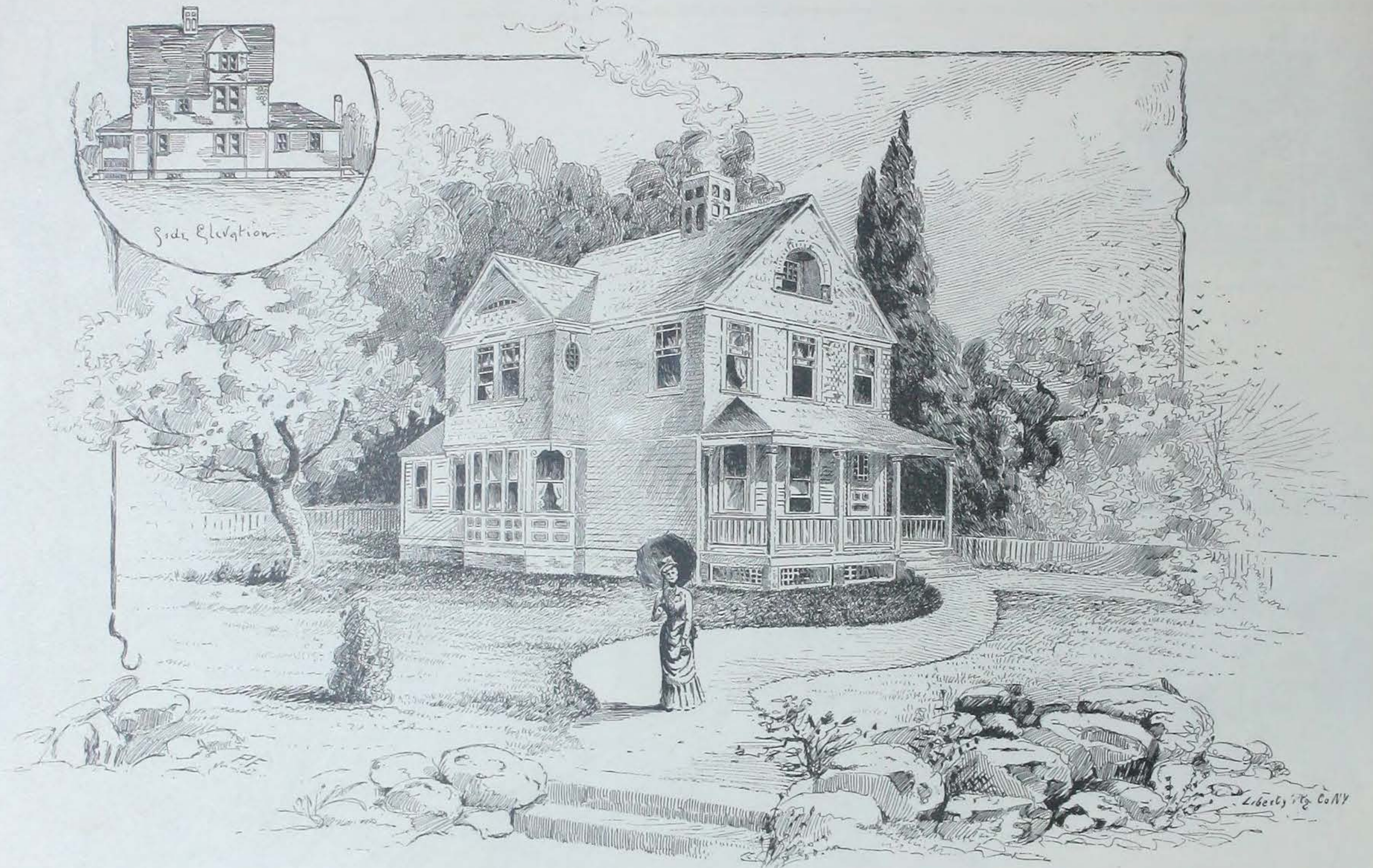
[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]



FIRST FLOOR. NO. 391



SECOND FLOOR. NO. 391



DESIGN No. 392. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 392

SIZE OF STRUCTURE: Front, 25 ft. Side, 45 ft., 10 in.
 SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.;
 First Story, 9 ft.;
 Second Story, 8 ft., 4 in.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$3,000, complete, except mantels and range.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and

at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Sliding doors connect the principal rooms of the first story.

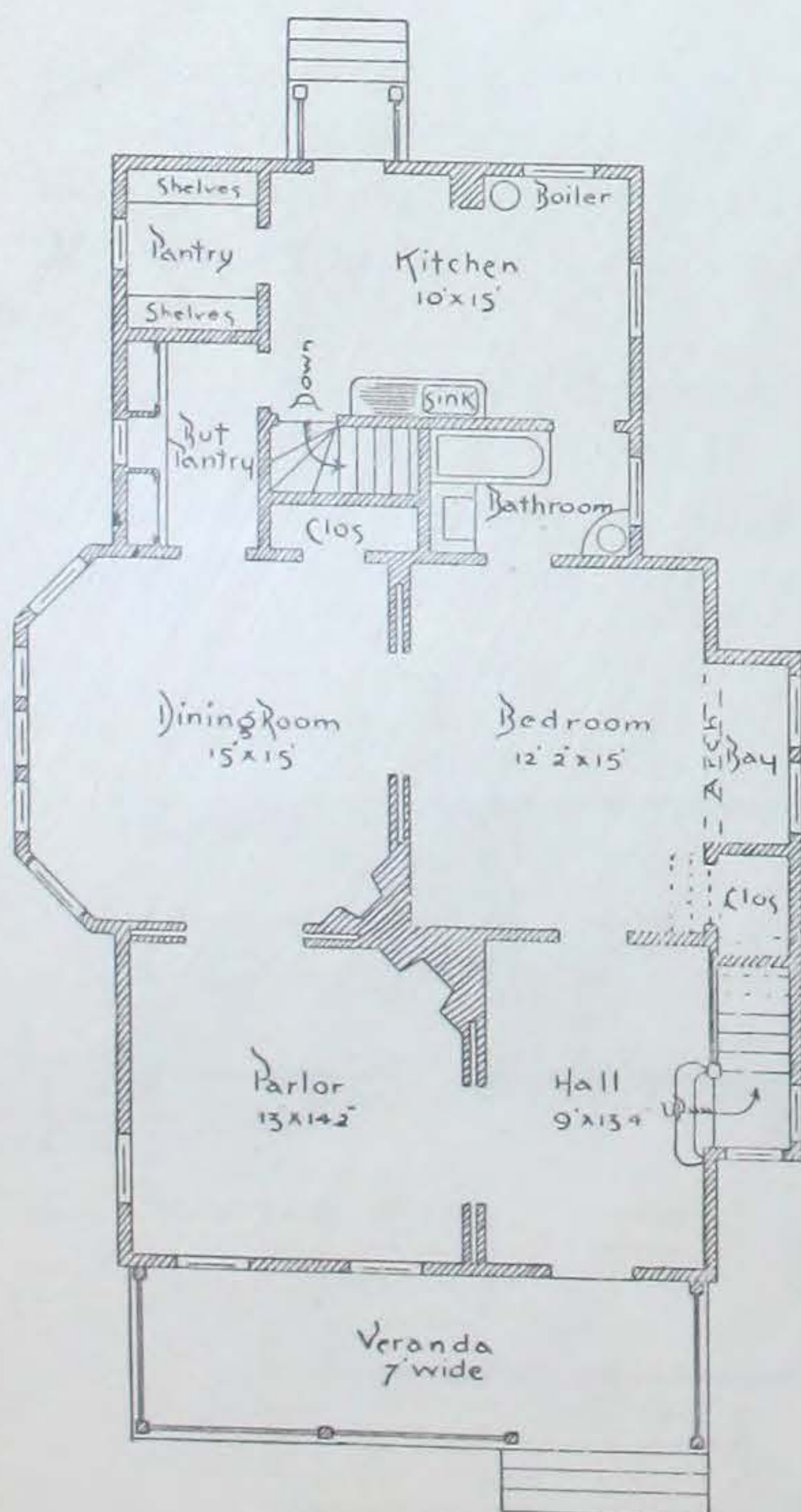
Open fire-places in the parlor and the dining-room.

The butler's pantry is large, and is fitted up with cupboards and drawers.

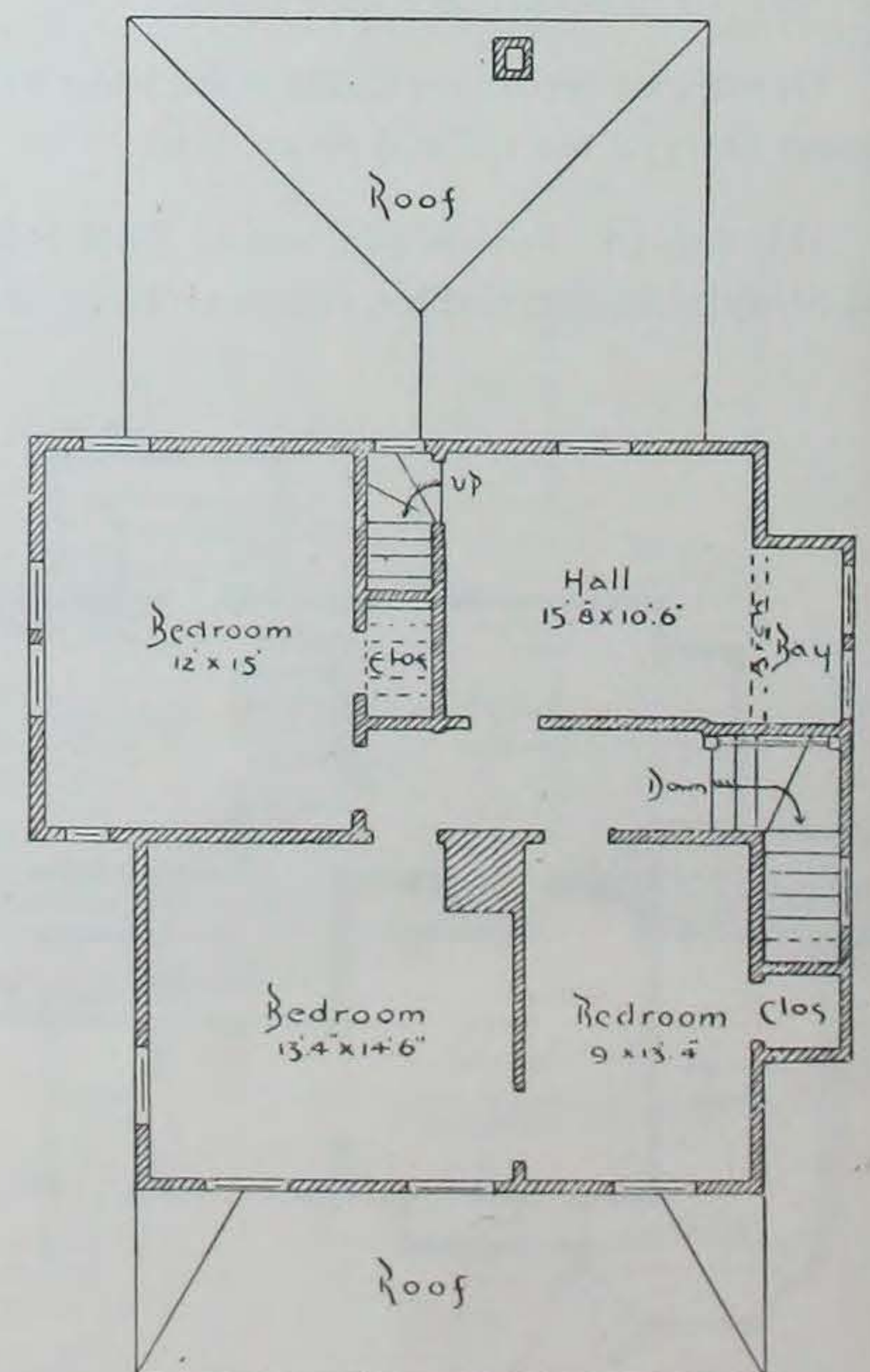
Hot water service to the bath-room and the kitchen sink.

The attic is floored but not finished. There is space to finish three good rooms if desired.

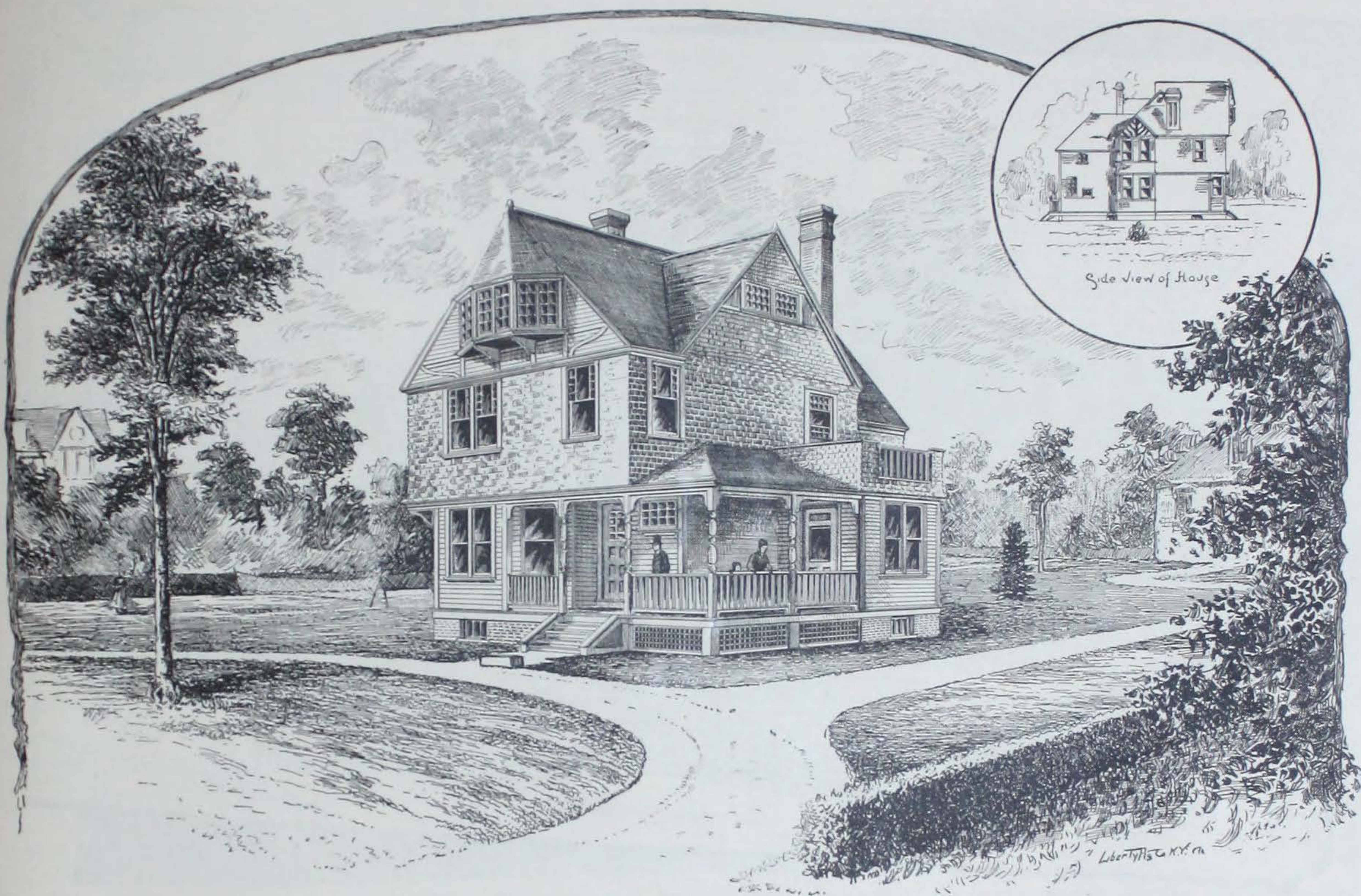
Cellar under the whole house.



FIRST FLOOR. NO. 392



SECOND FLOOR. NO. 392



DESIGN No. 393. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 393

SIZE OF STRUCTURE: Front, 25 ft., 2 in.; extreme width, 32 ft., 6 in. Side, 44 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft., 6 in.; Second Story, 8 ft., 10 in.; Attic Story, 7 ft., 6 in.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$2,800, complete, except mantels heater and range.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and at different dates the cost will be

somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

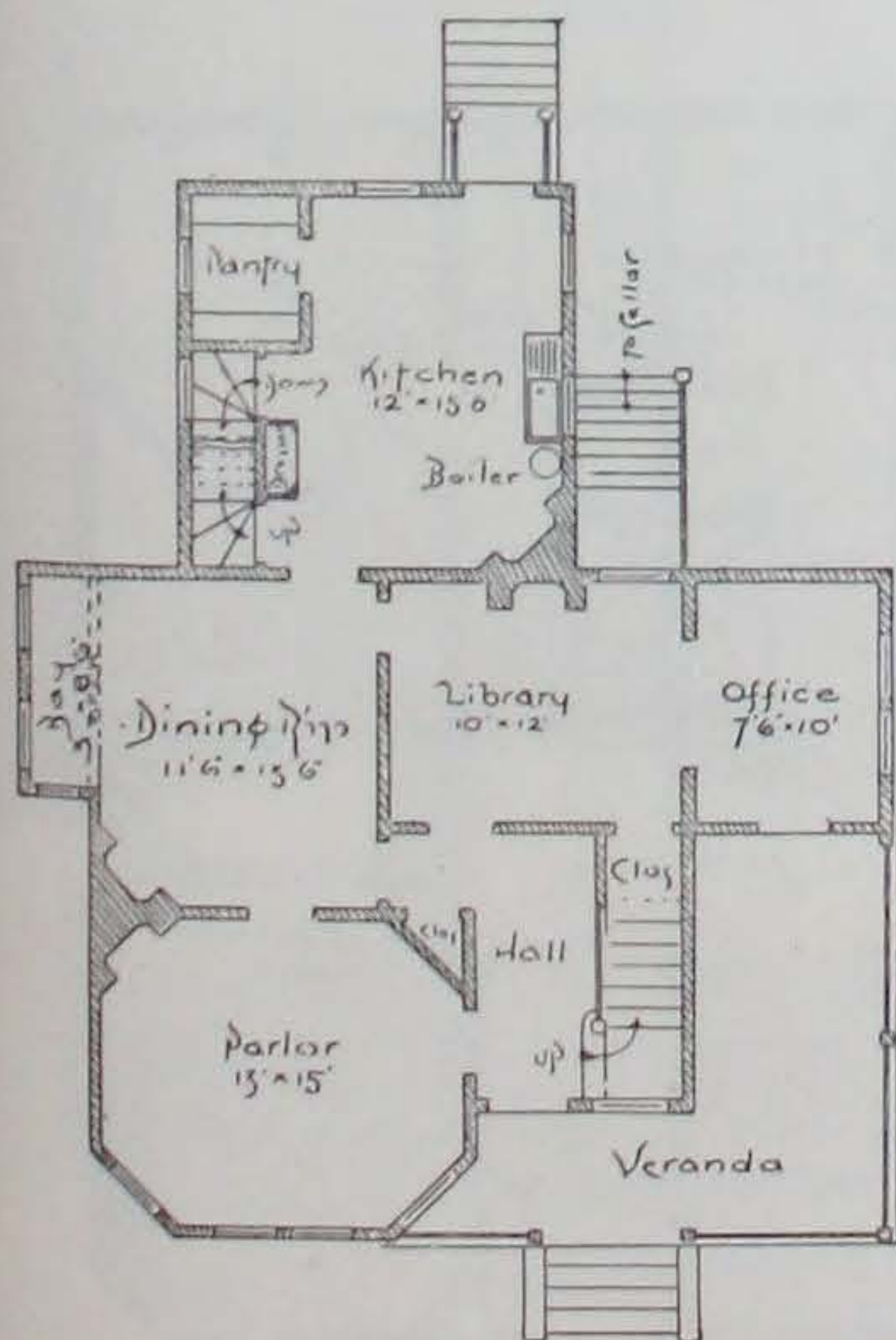
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—Designed for a Physician. The office can be entered from the veranda.

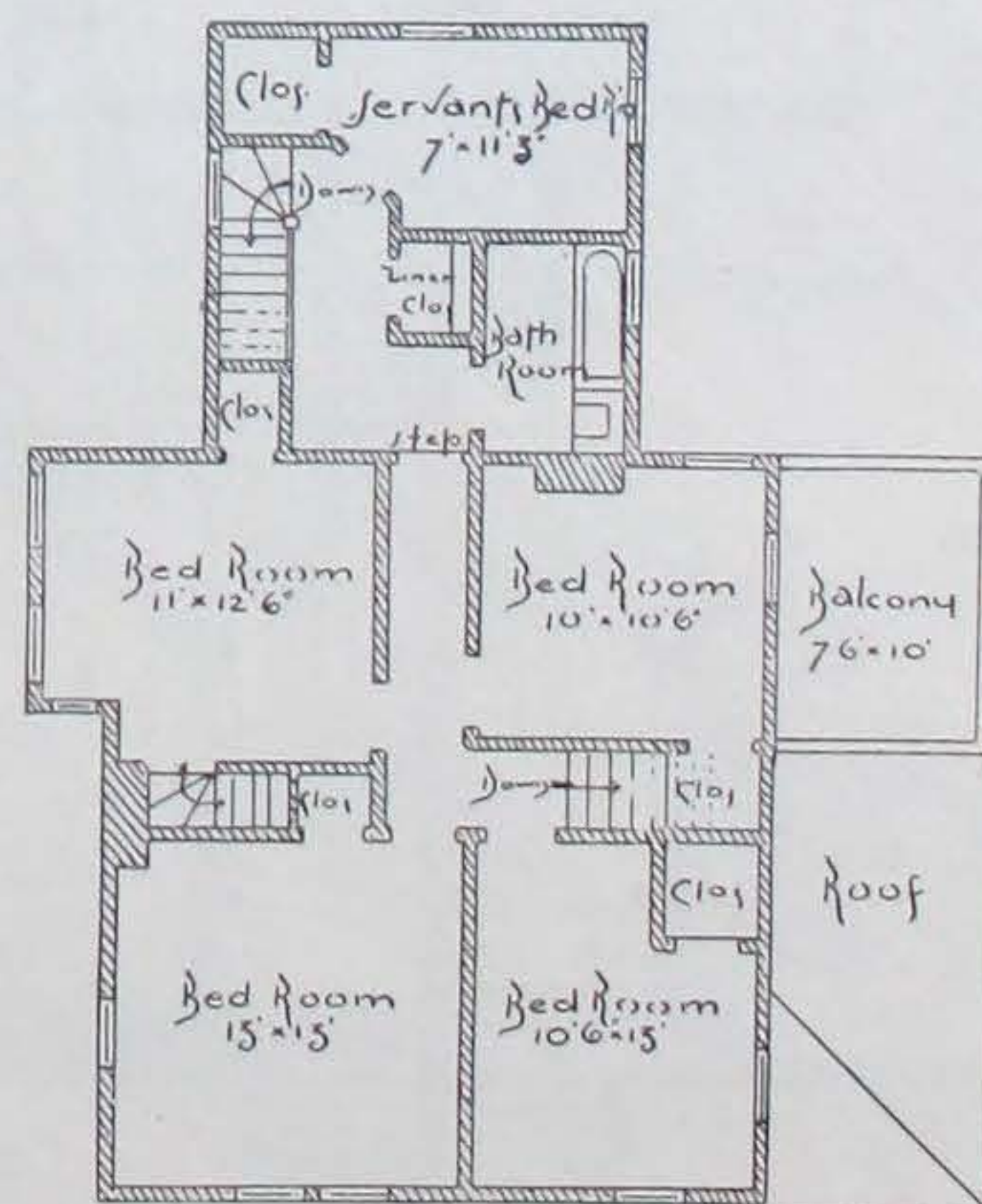
The veranda is 6 ft. wide on the front, and 8 ft. on the side.

Cellar under the main part of the house, with outside entrance to the same.

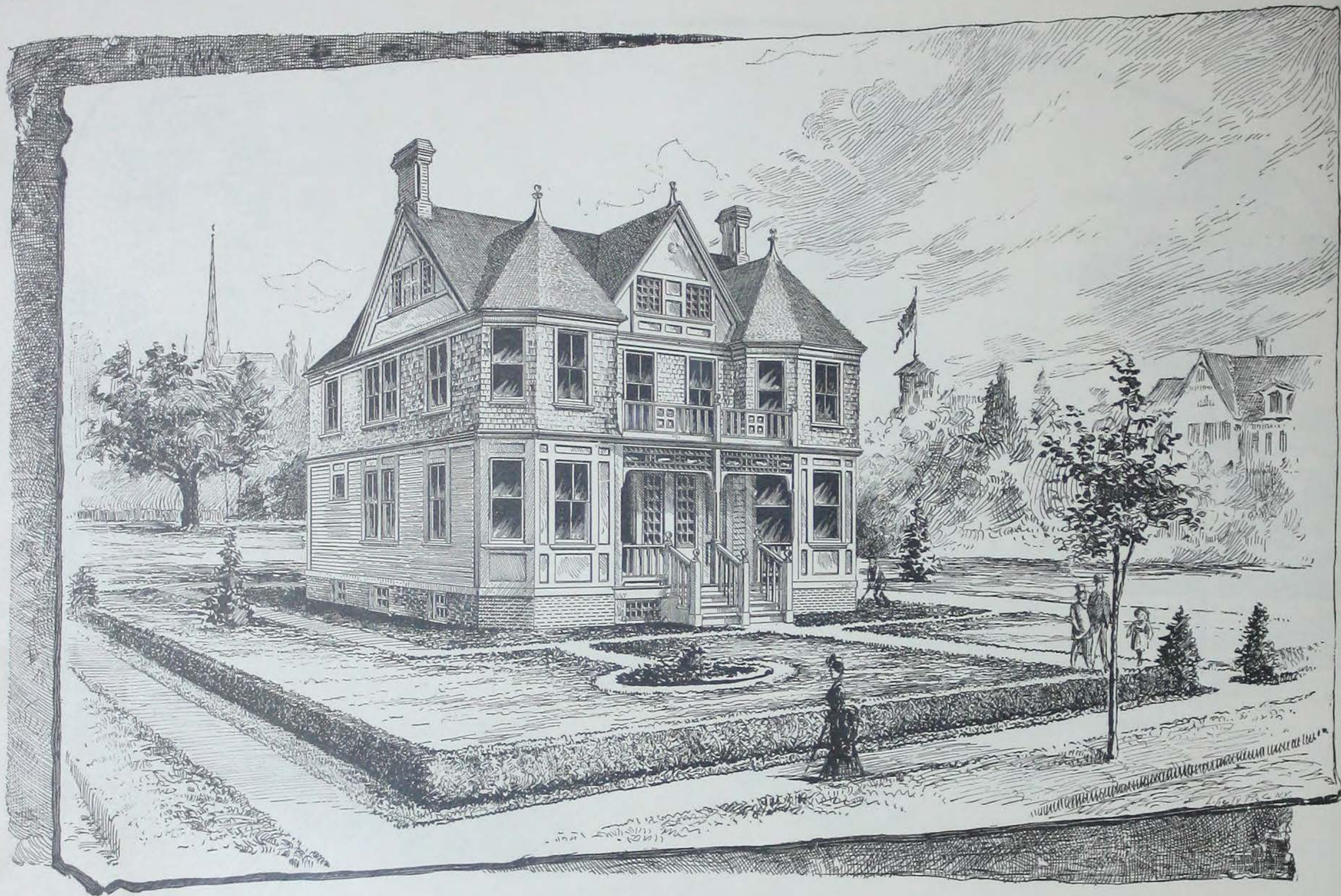
Two good bedrooms can be finished in the attic, if desired;—the front room with the projecting bay and window seat makes one of the pleasantest rooms in the house—they are not included in our estimate.



FIRST FLOOR. NO. 393



SECOND FLOOR. NO. 393



DESIGN No. 394. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 394

SIZE OF STRUCTURE: Front, 38 ft., 3 in. Side, 41 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$4,500, complete, except mantels and ranges.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

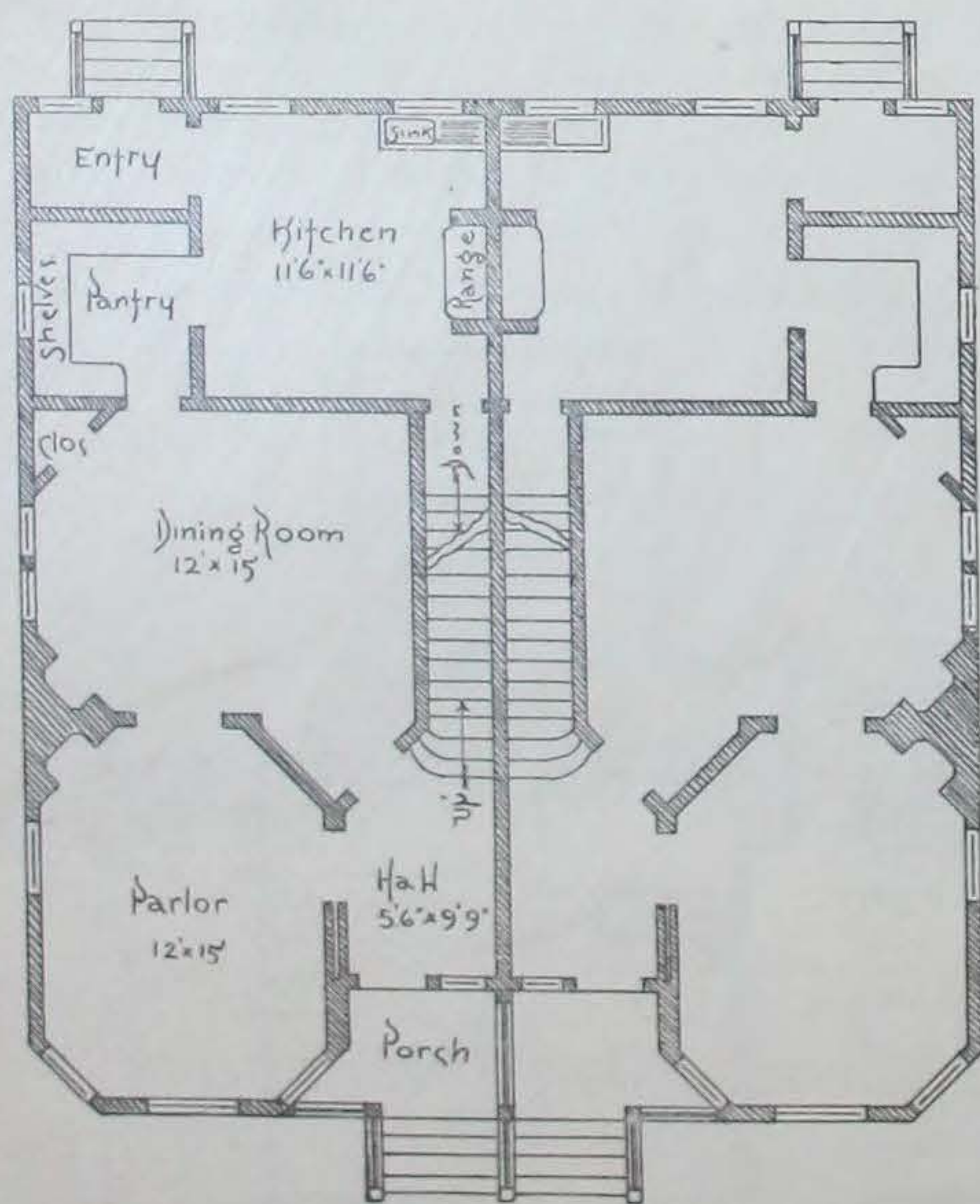
NOTE

The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886, in other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

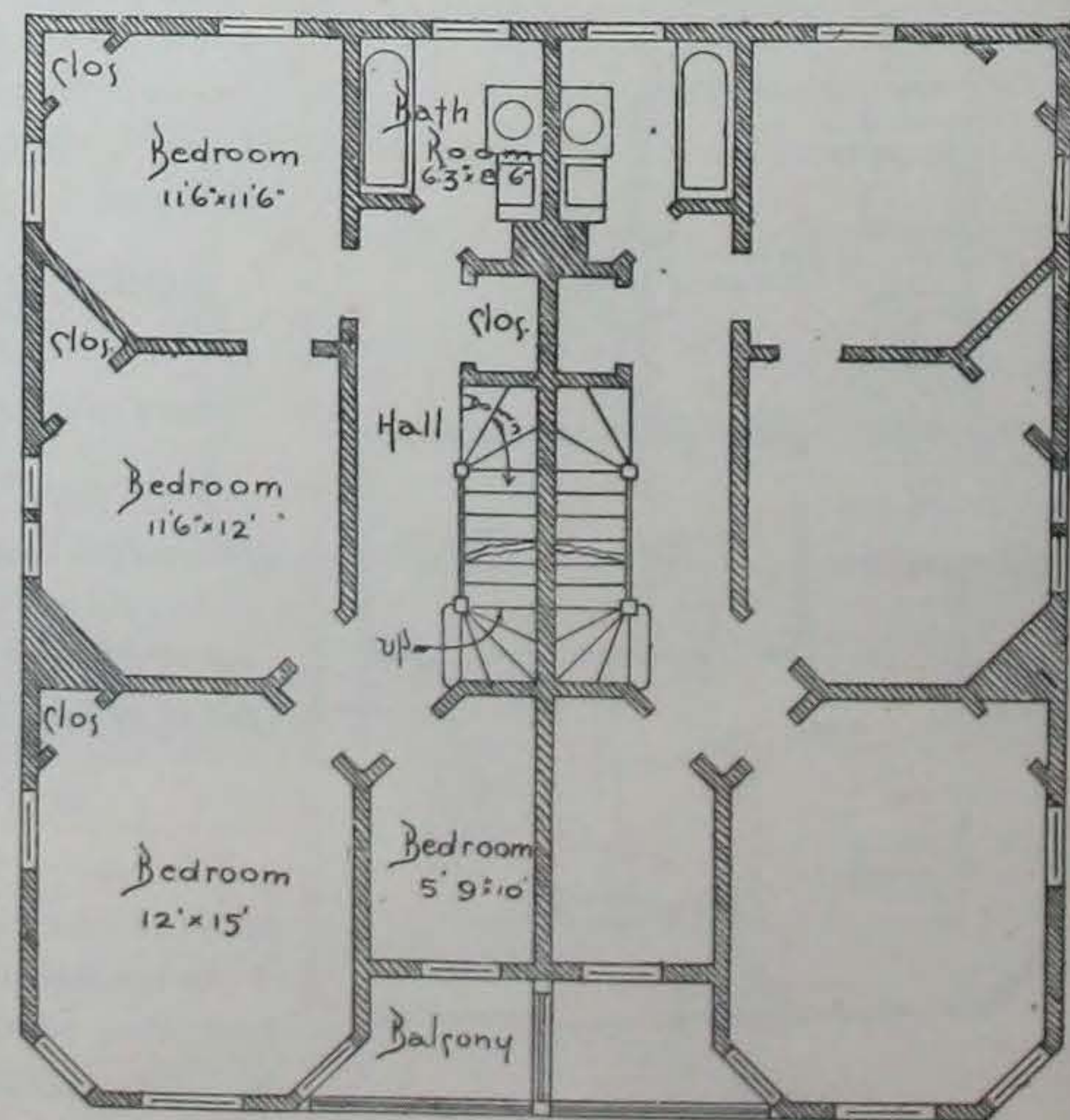
SPECIAL FEATURES.—A double cottage, very economically utilizing all the space.

Two rooms can be finished in the attic of each house, if desired, or the space can be left unfinished for storage purposes.

Cellars under the whole of each house with outside entrances to the same from the yard.

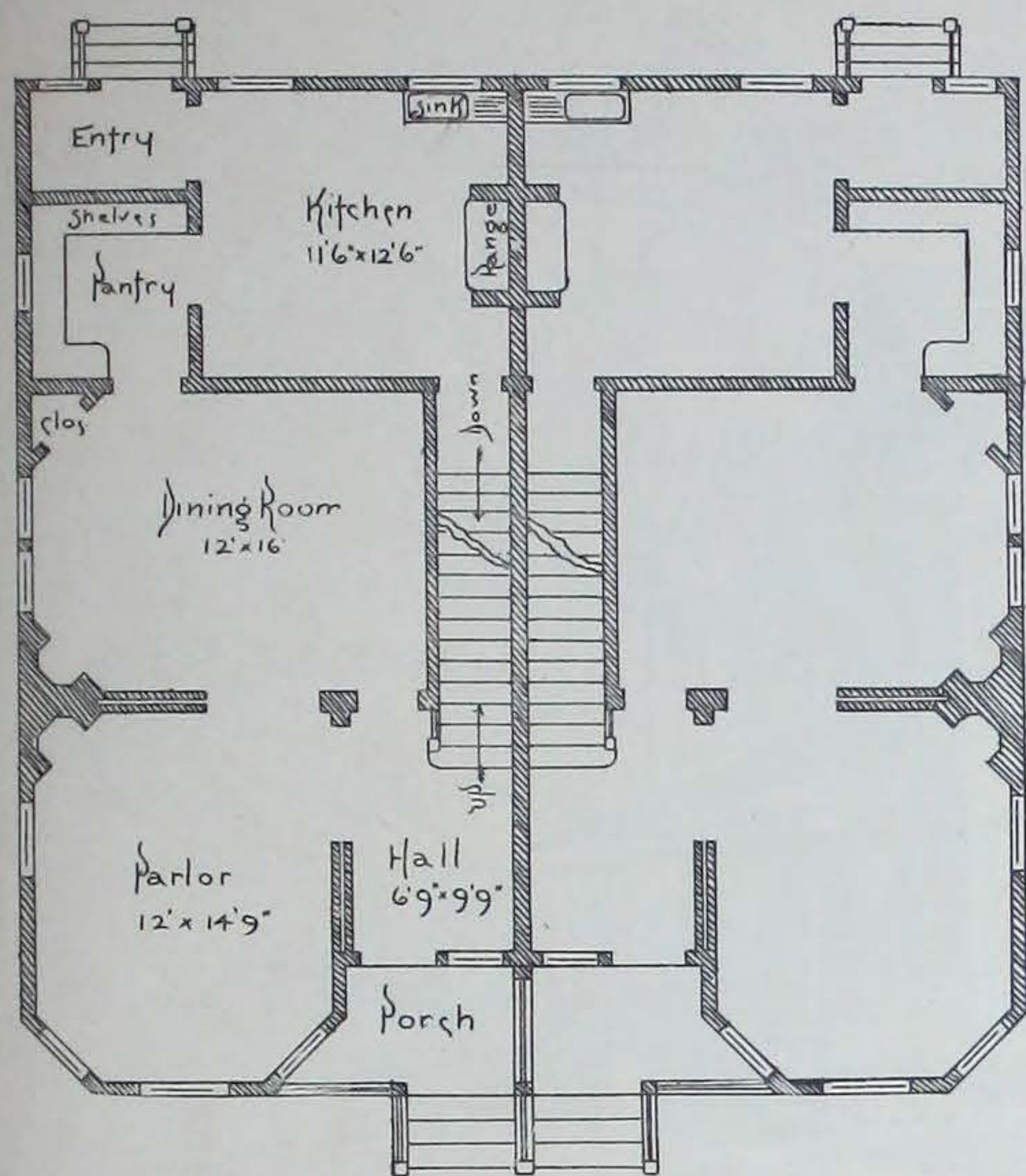


FIRST FLOOR. NO. 394



SECOND FLOOR. NO. 394

DESCRIPTION OF DESIGN NUMBER 395



FIRST FLOOR. NO. 395

WITH one or two slight modifications, the arrangement of rooms is the same as that of the foregoing design, Number 394.

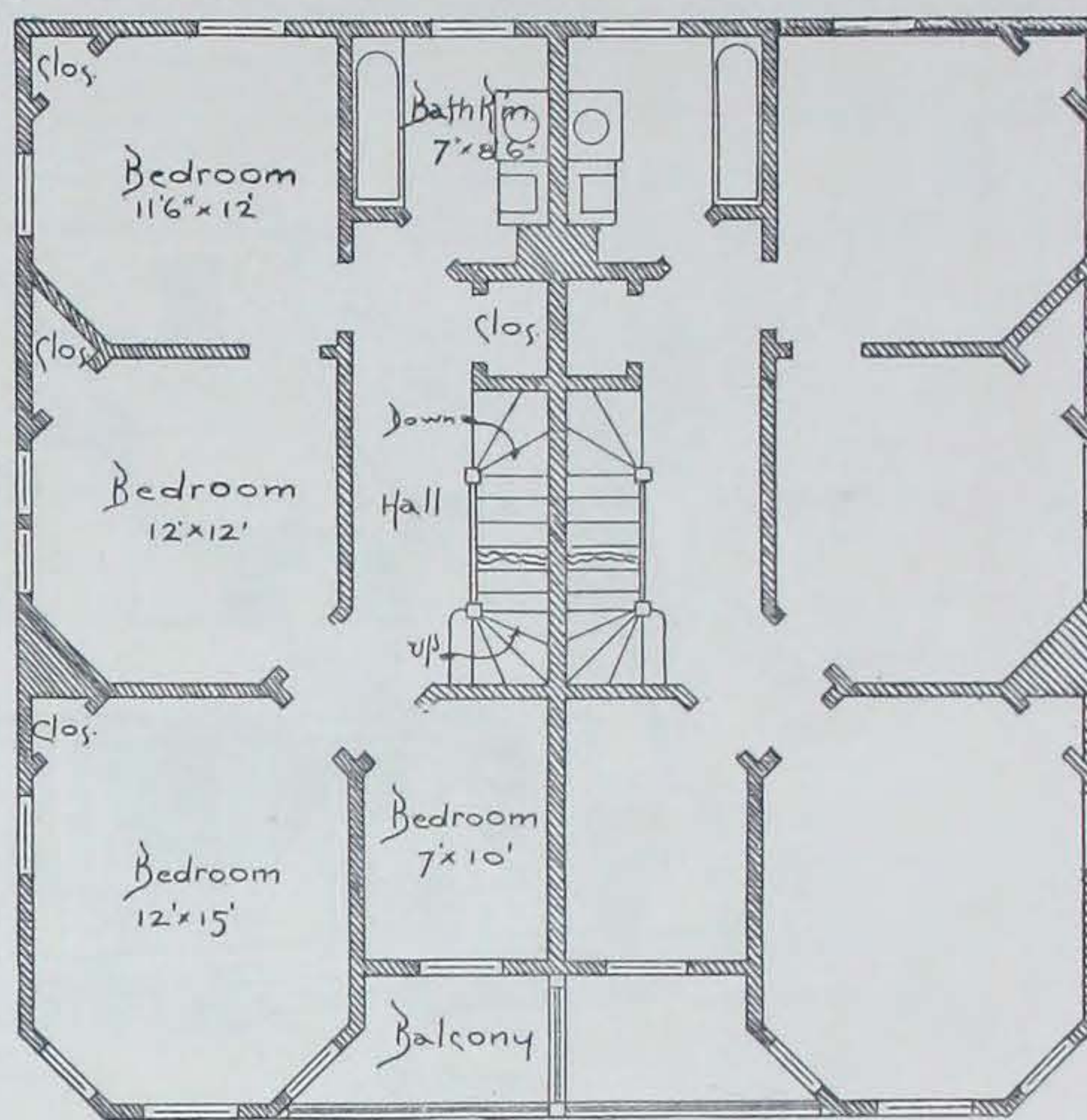
This house is 40 ft. wide, the hall, dining-room and kitchen being enlarged.

If built on a 50 ft. lot, there will be a passageway of 5 ft. at the side, for each house.

The exterior appearance is the same as shown by the perspective view of Number 394.

THE COST, exclusive of mantels and range, is \$4,800.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]



SECOND FLOOR. NO. 395

DESCRIPTION OF DESIGN NUMBER 396

THIS is a modification of design Number 394, adapted for a narrow city lot.

The house is 20 ft. wide and 41 ft. deep; height of stories same as in design Number 394.

The arrangement of rooms is compact and convenient, and the exterior is a wide departure from the flat fronts generally seen in city and village architecture.

NOTES

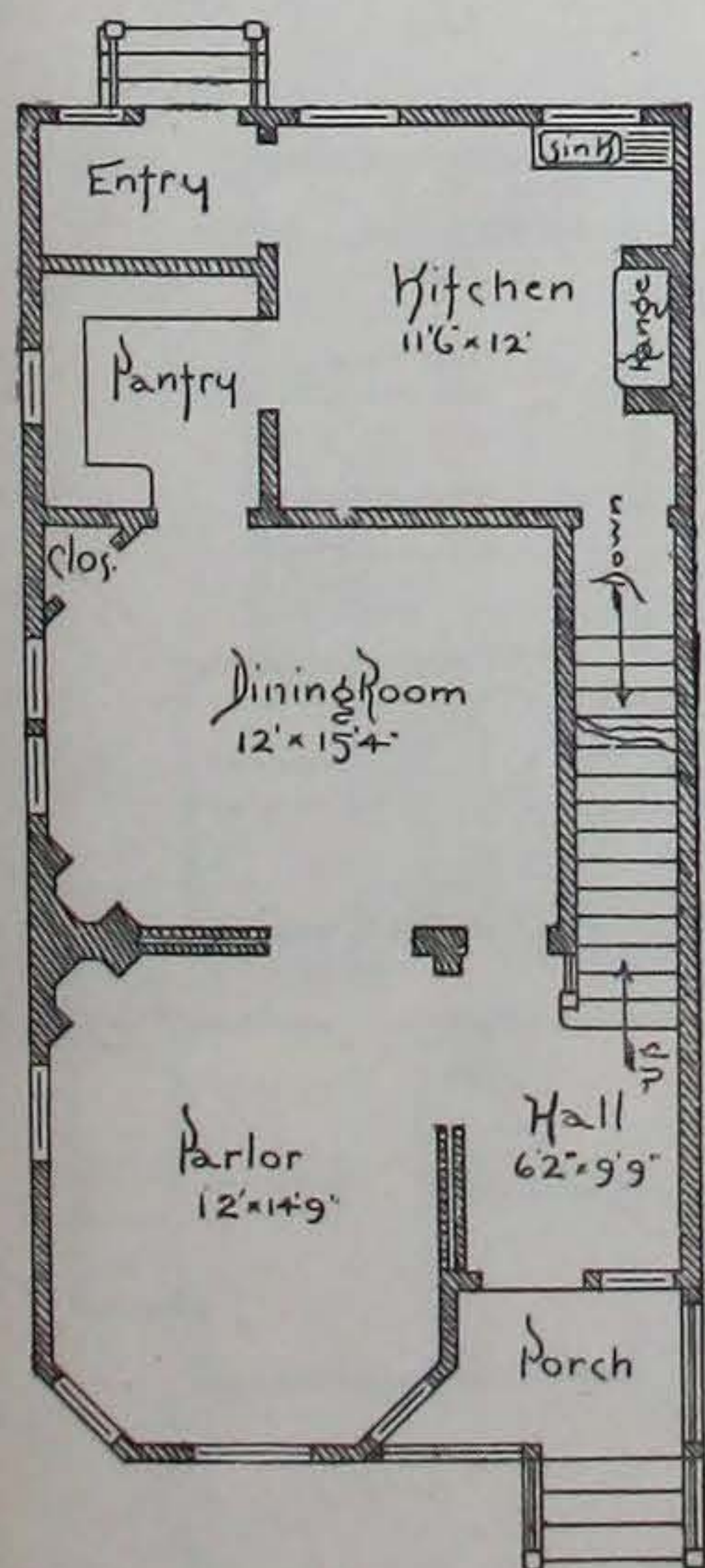
The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

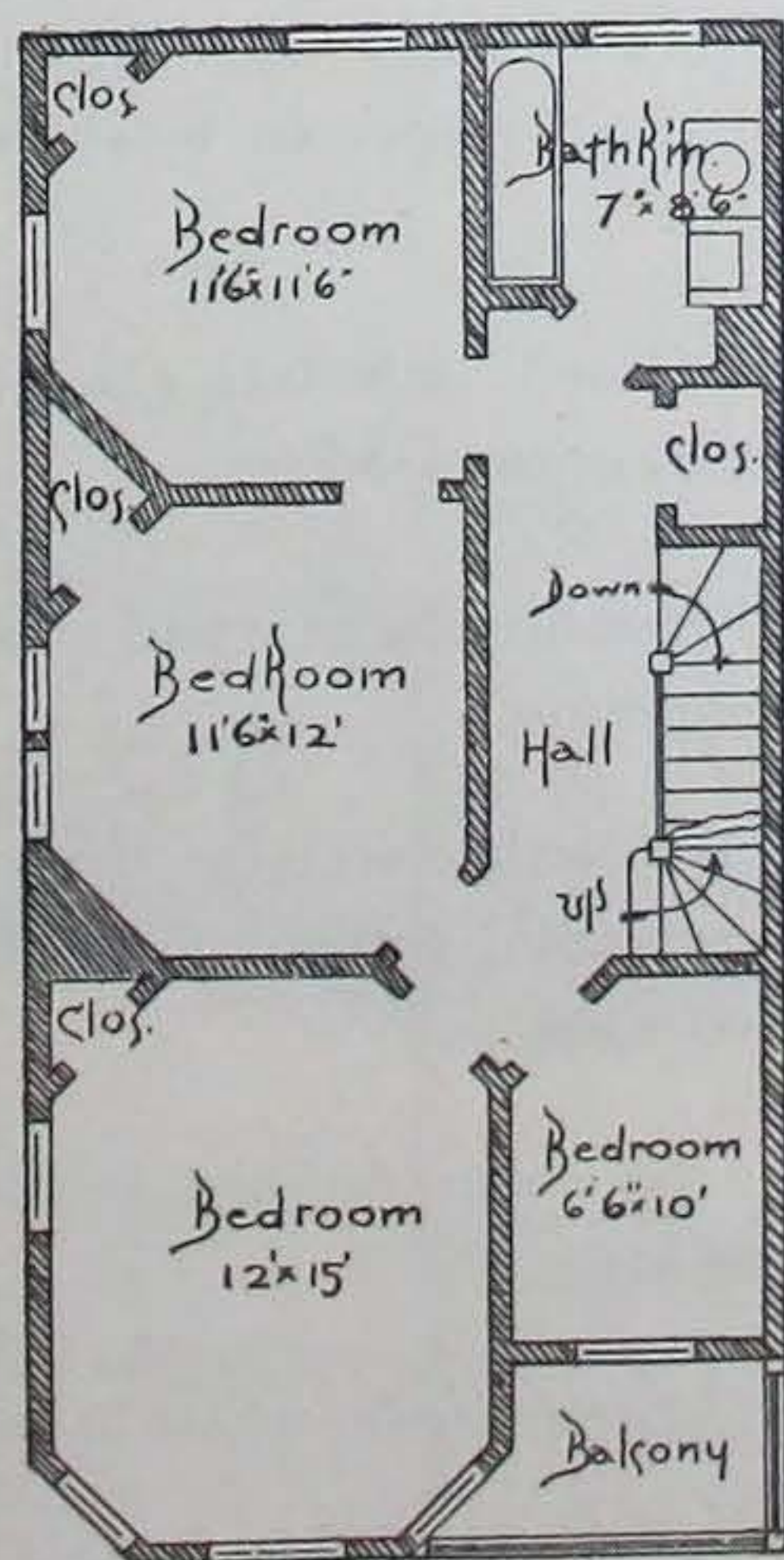
Cellar under the whole house.
Stone and brick foundations; clapboards, First Story; shingles, Second Story; panels in the Gables.
The Attic is unfinished.

COST: \$2,500, complete, except mantels and range.

[See page 219 for information about details, specifications, bill of quantities, and working plans of this design.]



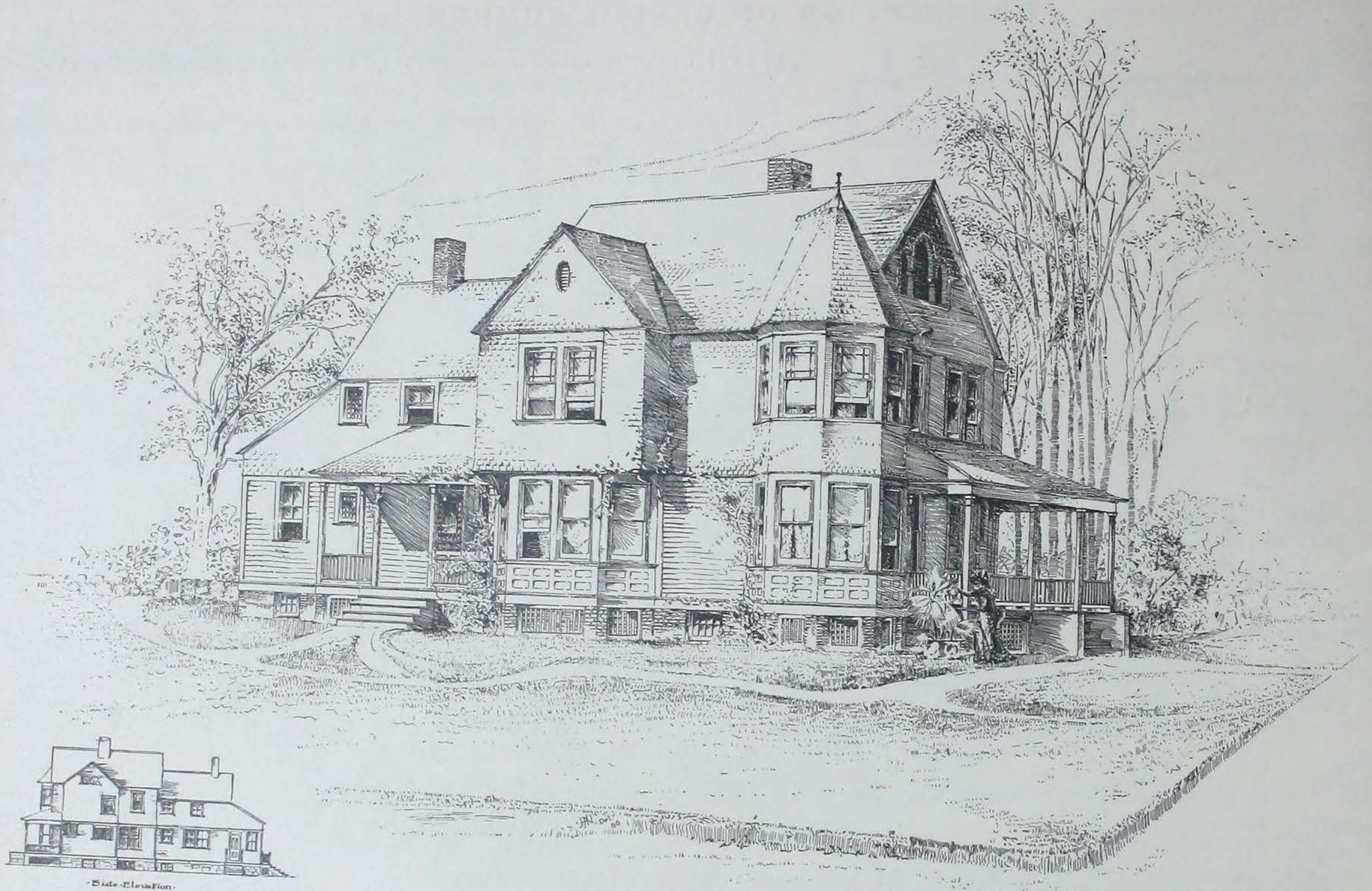
FIRST FLOOR. NO. 396



SECOND FLOOR. NO. 396.



FRONT ELEVATION. NO. 396



DESIGN No. 397. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 397

SIZE OF STRUCTURE: Front, 32 ft., 6 in., including projection of stairway. Side, 66 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft., 6 in.; Second Story, 8 ft., 6 in.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$3,000, complete, except mantels, range and furnace.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—The hall is connected with the parlor and the dining-room by sliding doors.

Stained cathedral glass in the staircase windows.

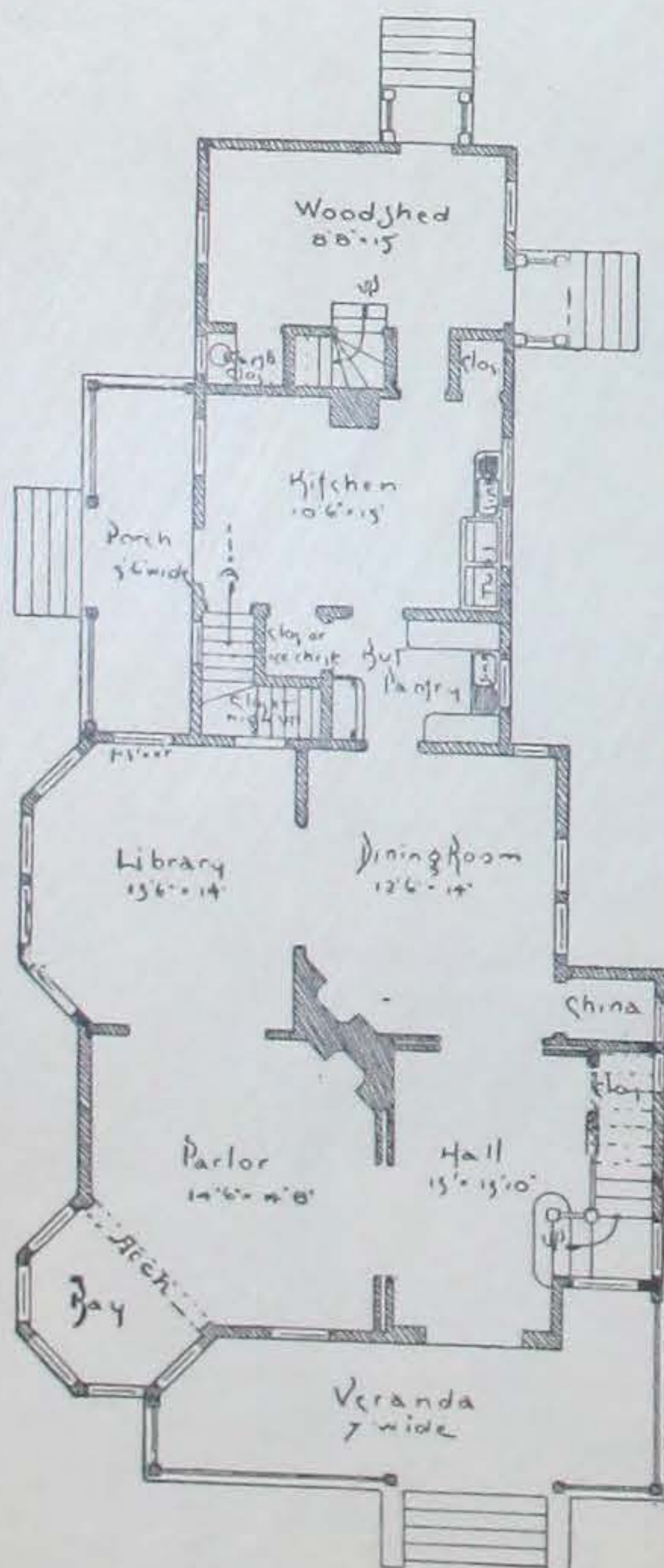
Open fire-places in parlor and dining-room.

An earth closet for the use of servants, entered from the wood shed.

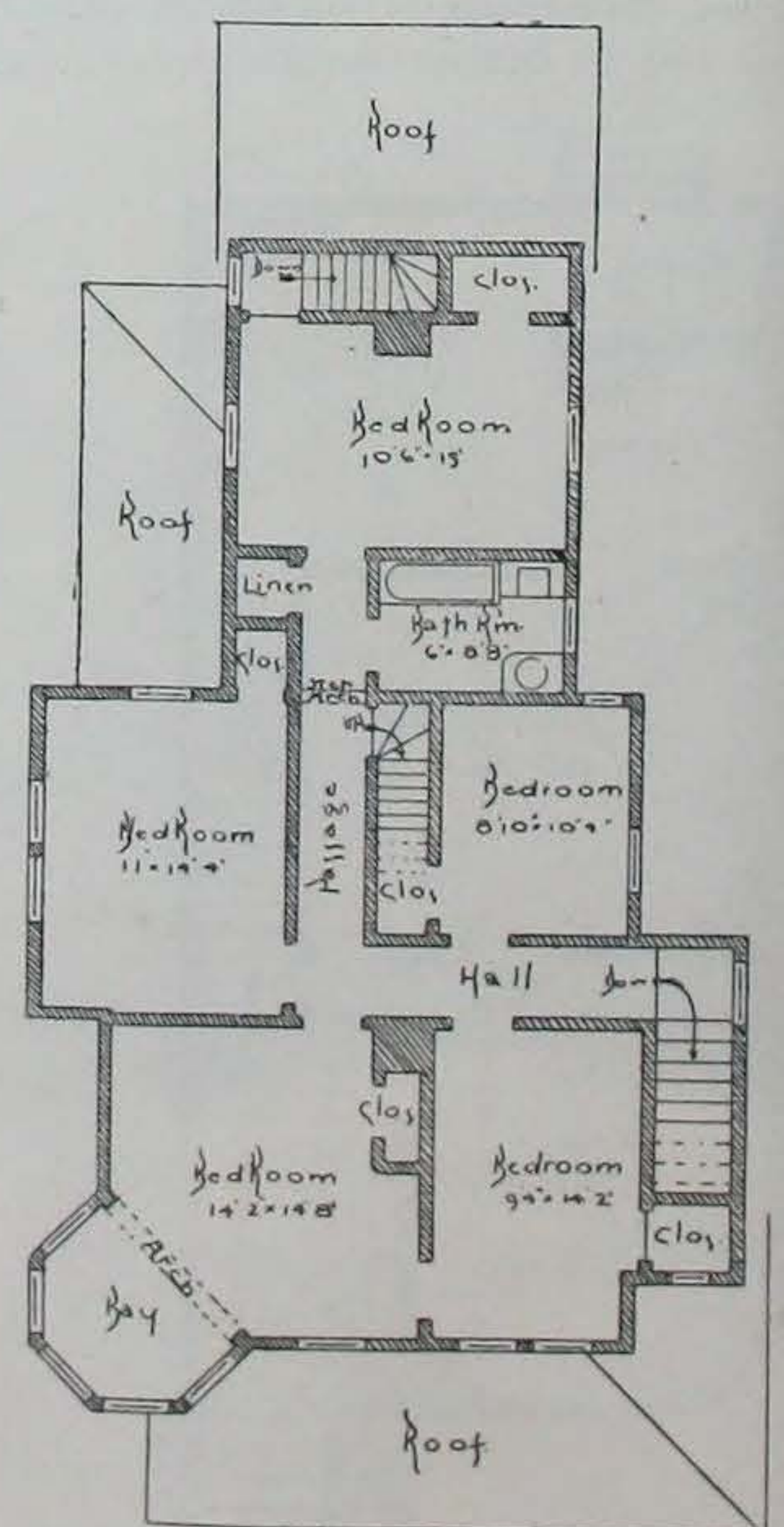
One room finished in the front attic.

Cellar under the whole house.

Heater pipes and registers provided.



FIRST FLOOR. NO. 397



SECOND FLOOR. NO. 397

DESCRIPTION OF DESIGN NUMBER 398

SEE COLORED FRONTISPIECE FOR PERSPECTIVE VIEW

SIZE OF STRUCTURE: Front, 40 ft., not including the projection of dining-room bay window; Side, 47 ft., including front veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft.; Second Story, 8 ft.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST \$4,400, complete, except mantels, range and furnace.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—The exterior appearance is shown by the colored frontispiece of this book.

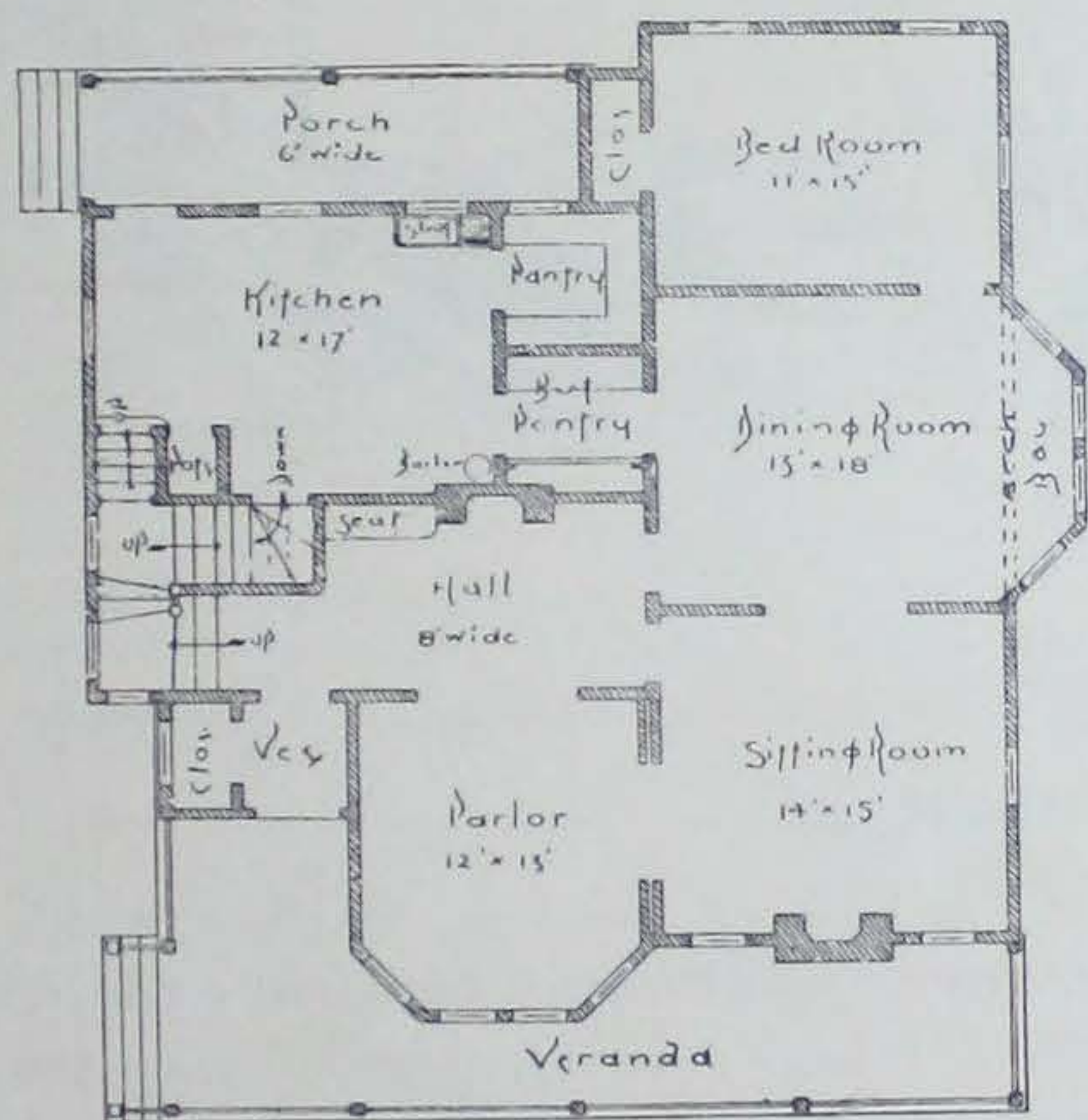
The hall has a fire-place opposite the large opening to the parlor. The effect of this from the parlor is pleasing. At the side of the fire-place is a cushioned seat. Sliding doors connect the sitting-room and dining-room.

Large pantry well lighted and large butler's pantry. Back stairway from the kitchen connects with the platform of the main stairway.

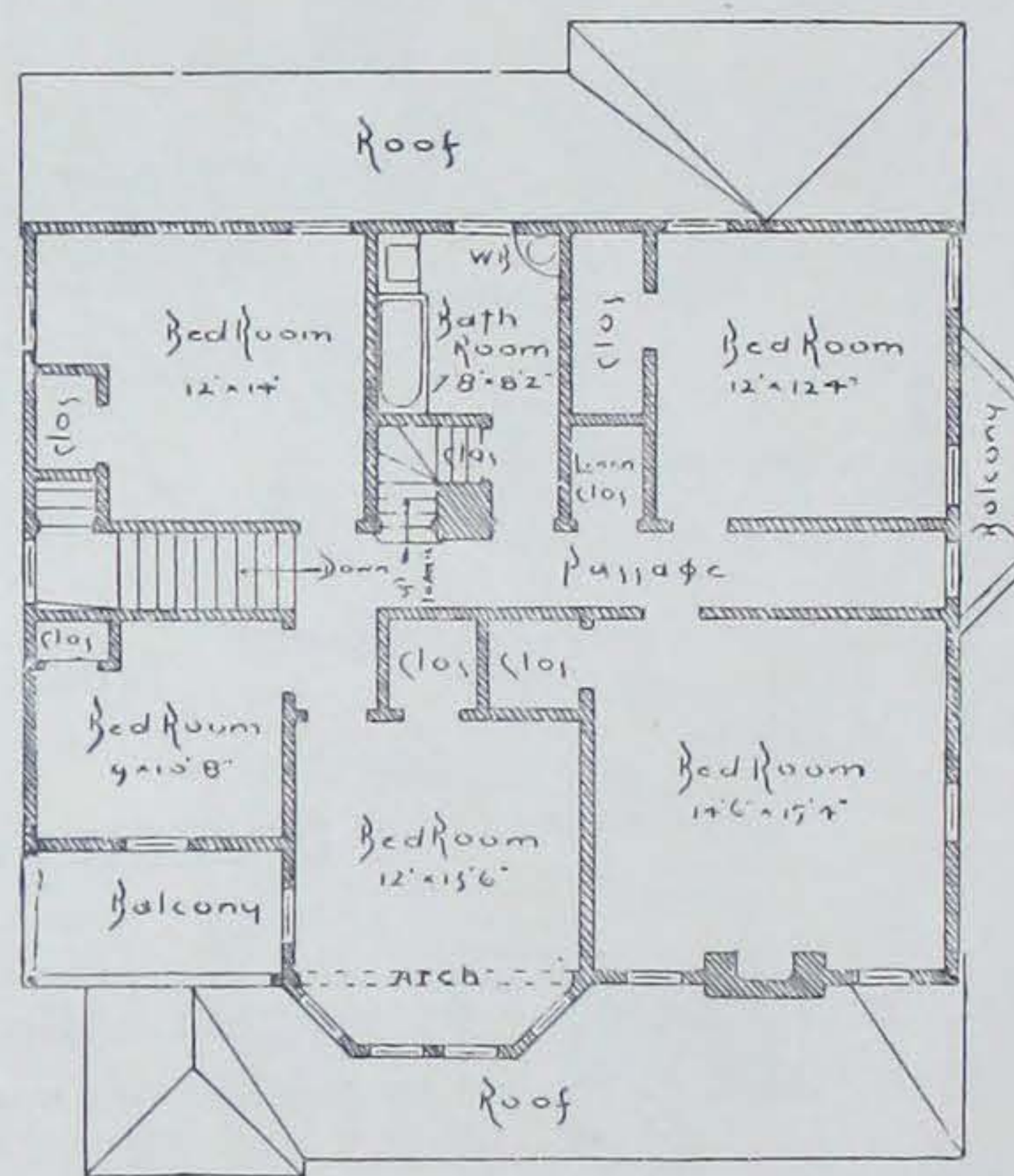
The second story has five bedrooms, a large bath-room and an abundance of large closets.

The attic has three bedrooms finished.

Cellar under the whole house with outside entrance to same. Furnace pipes and registers are provided.



FIRST FLOOR. NO. 398



SECOND FLOOR. NO. 398

DESCRIPTION OF DESIGN NUMBER 399

SEE COLORED FRONTISPIECE FOR PERSPECTIVE VIEW

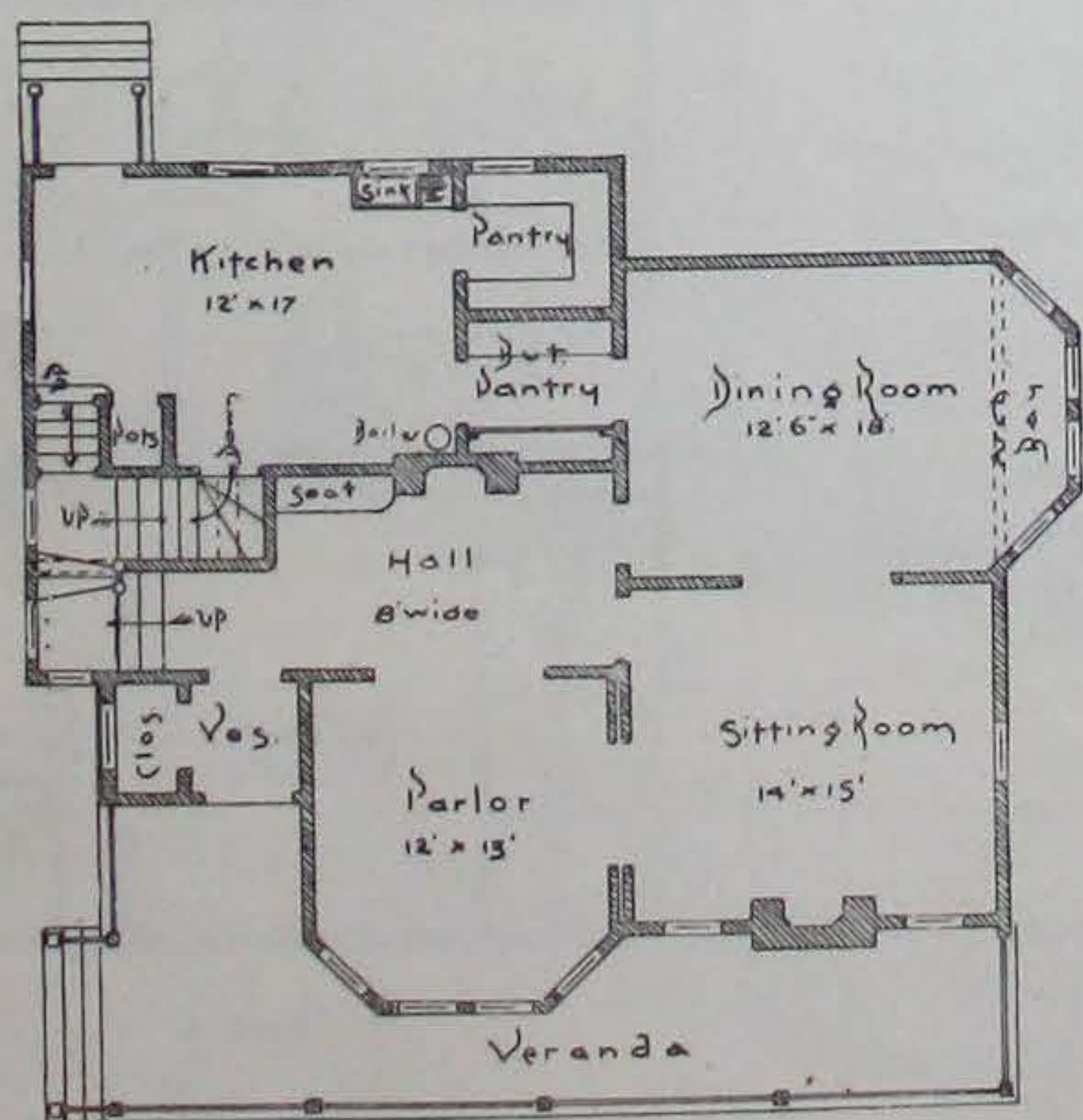
This is a modification of the preceding plan, the first story bedroom and the rear porch being left off. The second story accommodations are the same.

The height of stories, materials and general appearance are the same as the preceding design.

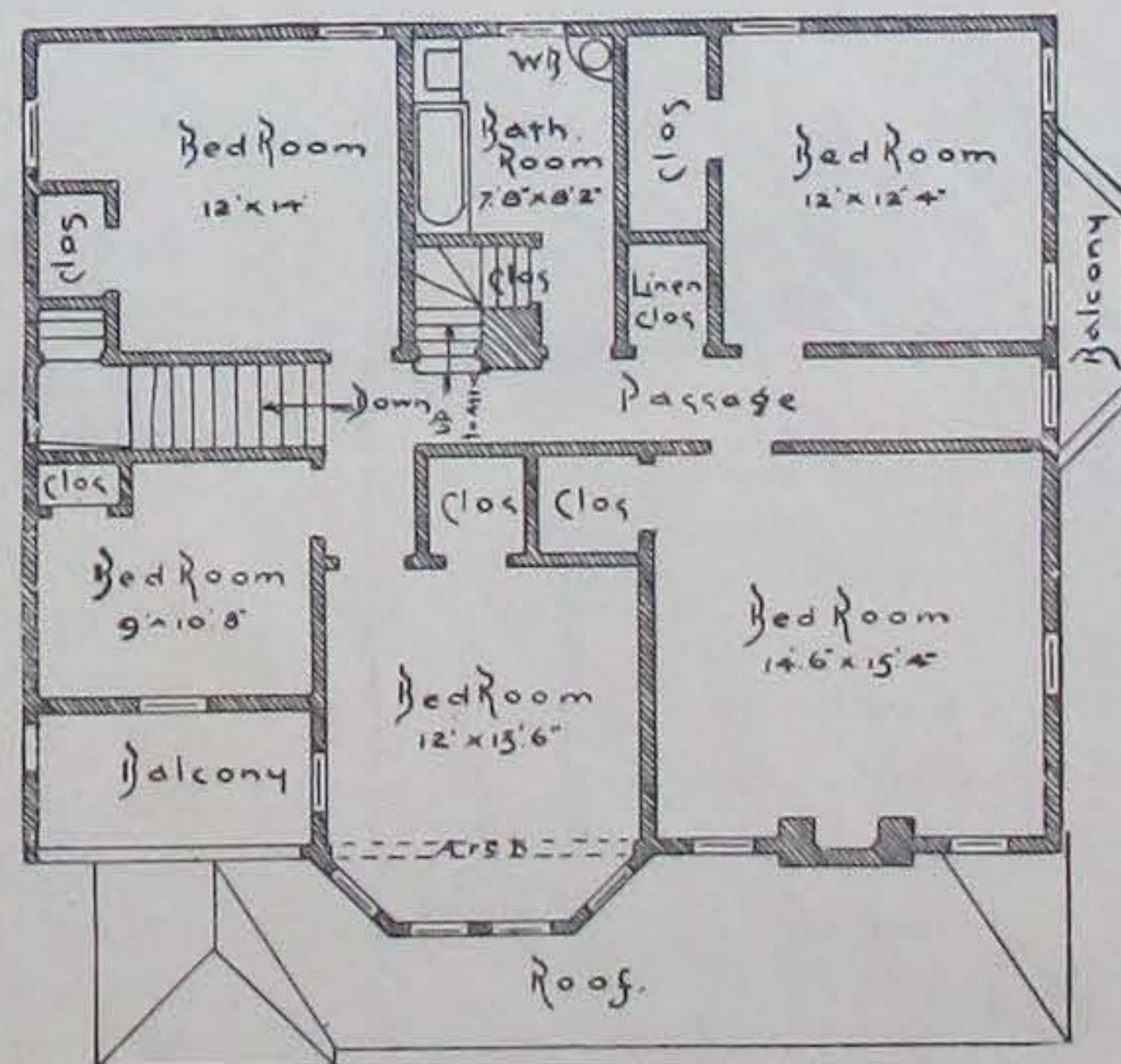
The attic is unfinished. Cellar under kitchen and hall.

COST \$3,800, complete, except mantels, range and heater.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]



FIRST FLOOR. NO. 399



SECOND FLOOR. NO. 399



DESIGN No. 400. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 400

SIZE OF STRUCTURE: Front, 18 ft. Extreme width, including verandas, 36 ft. Side, 34 ft., not including front veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 9 ft., Second Story, 8 ft.

MATERIALS: Foundation, brick piers; First Story, clapboards; Second Story, shingles; Roof, shingles.

COST: \$2,500, complete, except mantels and office fittings.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—Designed for a real estate agent's residence and office. It has a general business office, entered from the veranda, and two private rooms or offices. These can be used as separate offices if desired, by closing up the connecting doors. Each office has an open fire-place.

The second floor contains a complete set of living apartments, viz: parlor, dining-room, kitchen and three bedrooms.

The attic is unfinished, but two good rooms can be finished there if required.

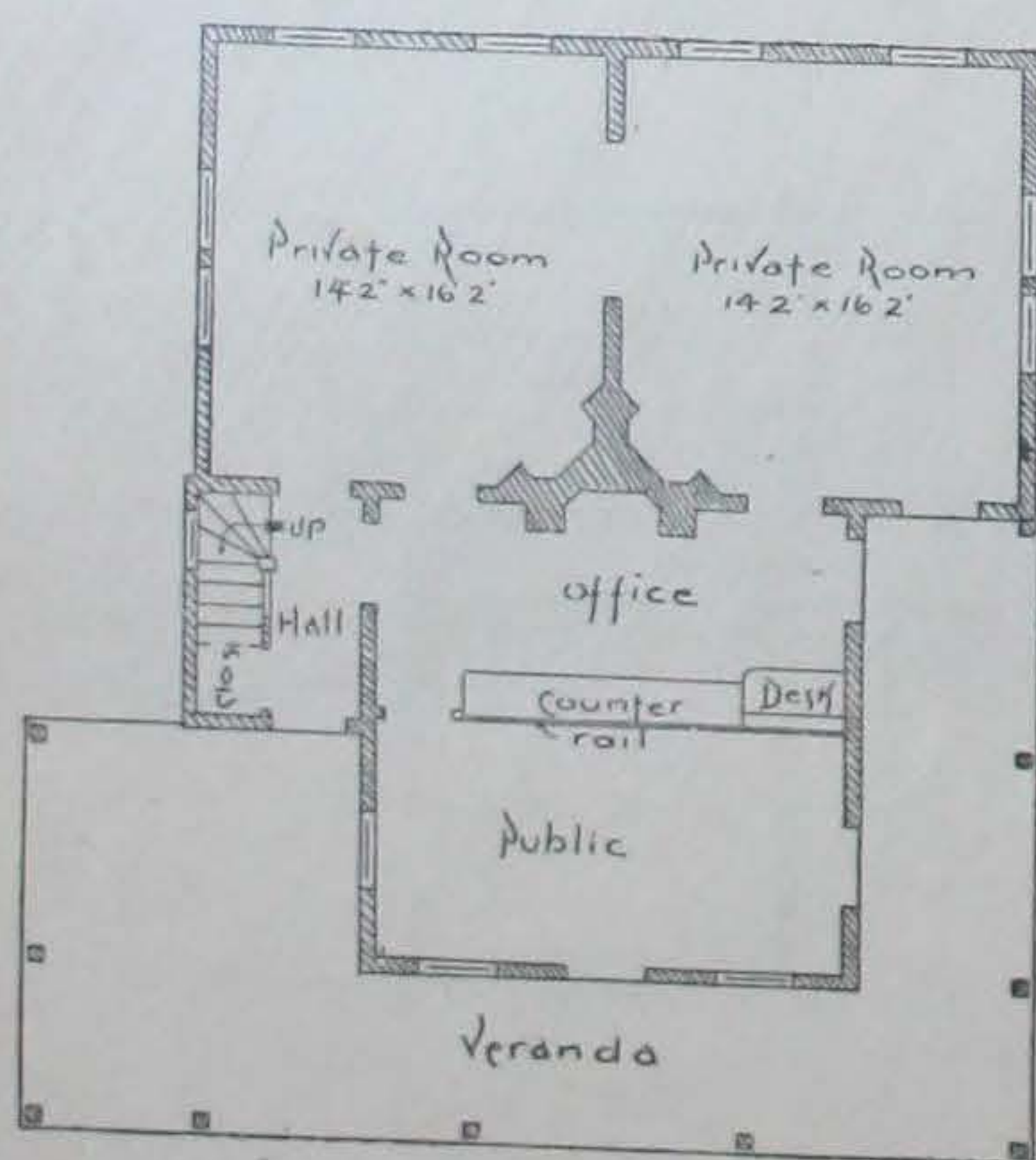
There is no cellar; the building is set upon brick piers. A cellar under the house would cost \$150 to \$250 additional.

NOTES

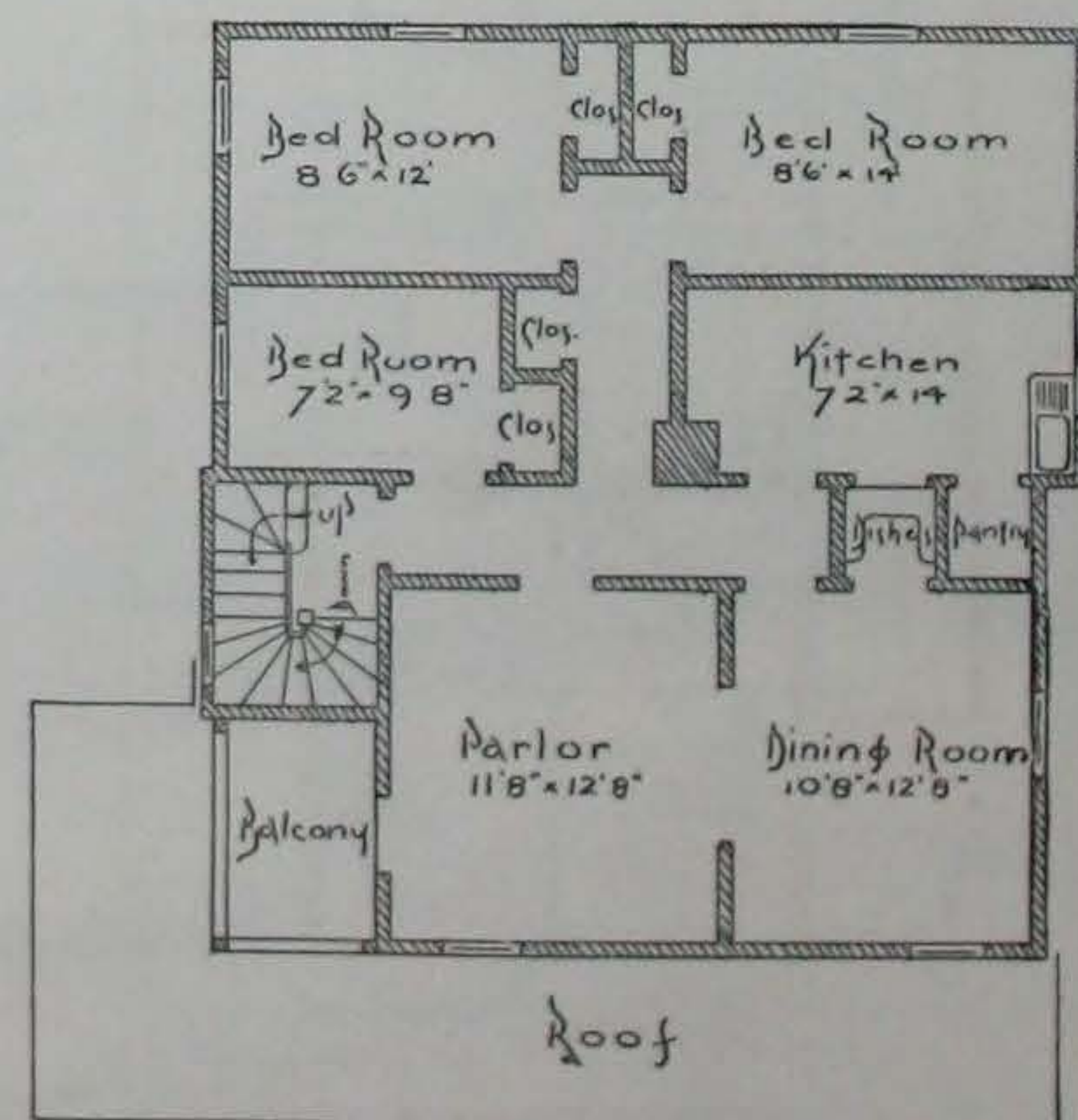
The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.



FIRST FLOOR. NO. 400



SECOND FLOOR. NO. 400

DESCRIPTION OF DESIGN NUMBER 401

COST ; \$2,800, except mantels.

This is a modification of the preceding design, Number 400, both floors being arranged for a dwelling house. The size of the house, height of stories and materials of which it is constructed are the same.

A pantry is added to the rear of first floor, 6 ft. by 10 ft.,

outside measurement. A cellar is provided with brick and stone foundation walls under the whole house.

Six bedrooms on the second floor, and two can be finished in the attic, if desired.

This will make an excellent seaside house on account of the large veranda.

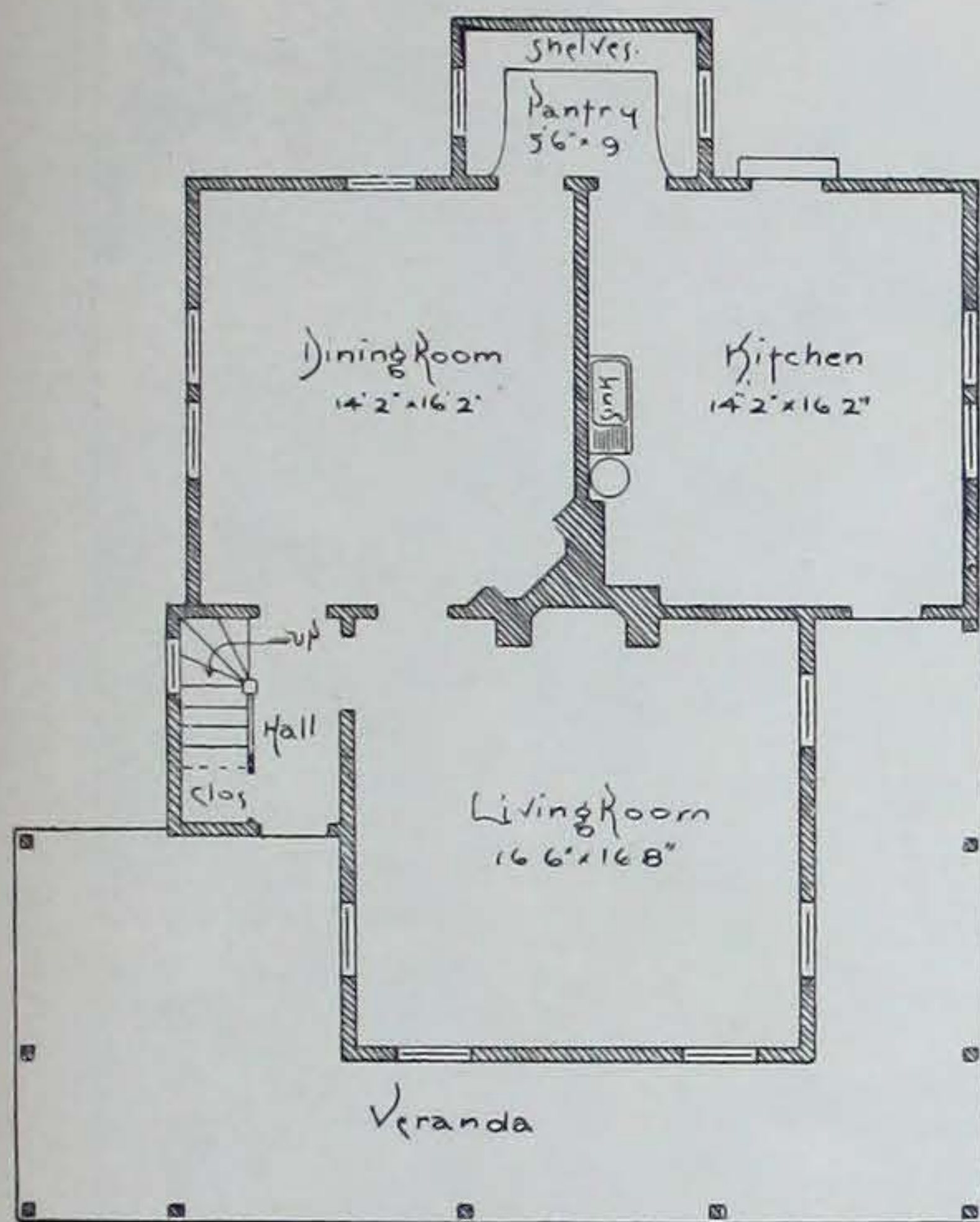
[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

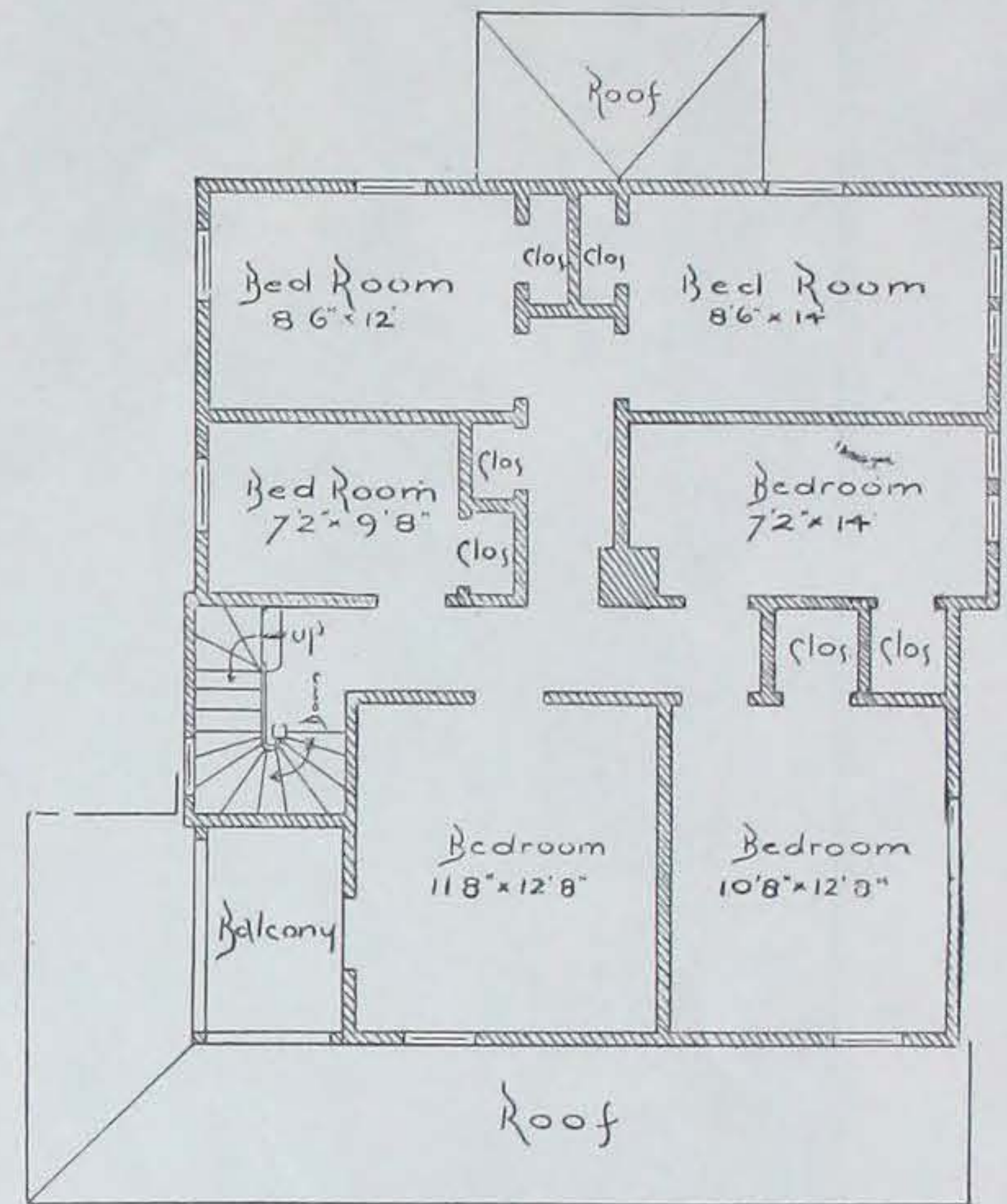
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FIRST FLOOR. NO. 401



SECOND FLOOR. NO. 401

DESCRIPTION OF DESIGN NUMBER 402

SIZE OF STRUCTURE: Front, 18 ft.; extreme width, including verandas, 36 ft. Side, 46 ft., not including front veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 6 ft., 6 in.; First Story, 9 ft.; Second Story, 8 ft.; Attic unfinished.

MATERIALS: Foundation, stone and brick; First Story, clapboards; Second Story, shingles; Roof, shingles.

COST : \$3,000, complete, except mantels and kitchen range.

[See page 219 for information about details, specifications, bill of quantities, and working plans of this design.]

SPECIAL FEATURES—Another modification of design Number 400. A kitchen is added at the rear, which provides for a sitting-room elsewhere, as shown by the plan. A store-room of good size over the kitchen.

A bath-room is added on second floor.

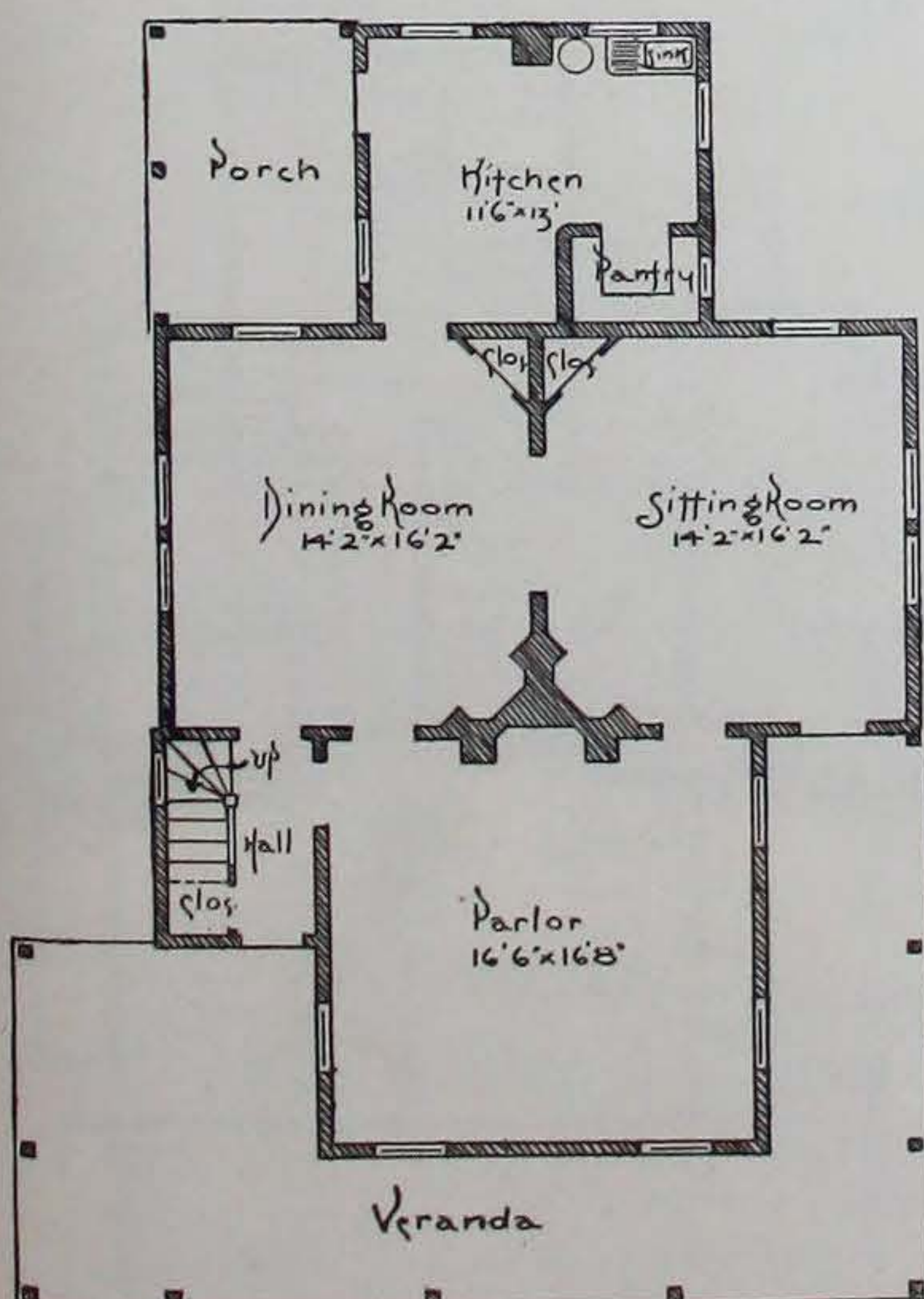
Cellar under the kitchen only, entered from a trap door in the floor of the kitchen porch.

NOTES

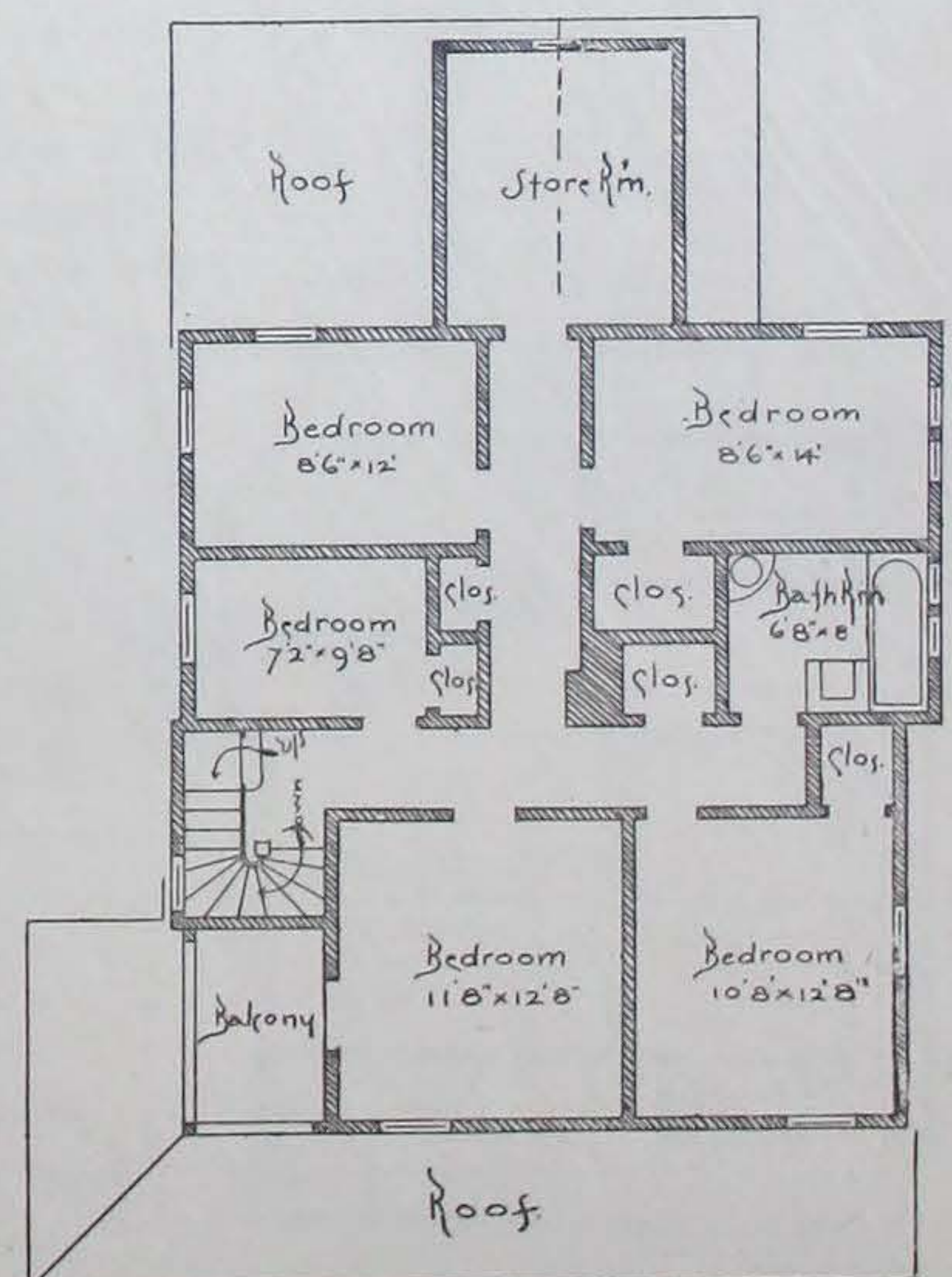
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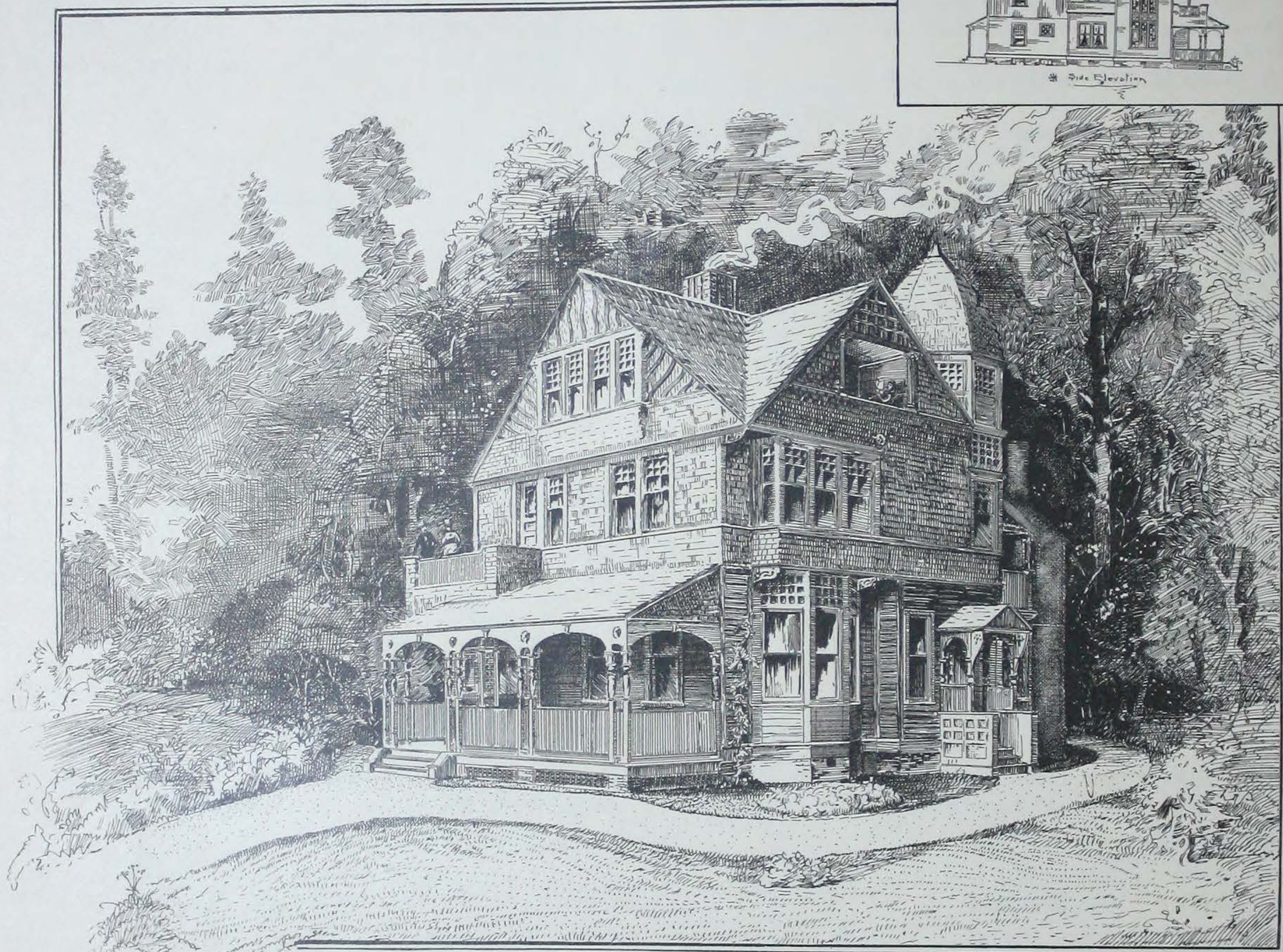
This design can be reversed, enlarged, reduced, or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.



FIRST FLOOR. NO. 402



SECOND FLOOR. NO. 402



DESIGN No. 403. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 403

SIZE OF STRUCTURE: Front, 27 ft., 4 in.; extreme width 33 ft. Side, 47 ft., 6 in., not including front veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, clapboards and shingles; Gables, shingles; Roof, shingles.

COST: \$4,000, complete, except mantels.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—Hall of good size, with a hardwood staircase.

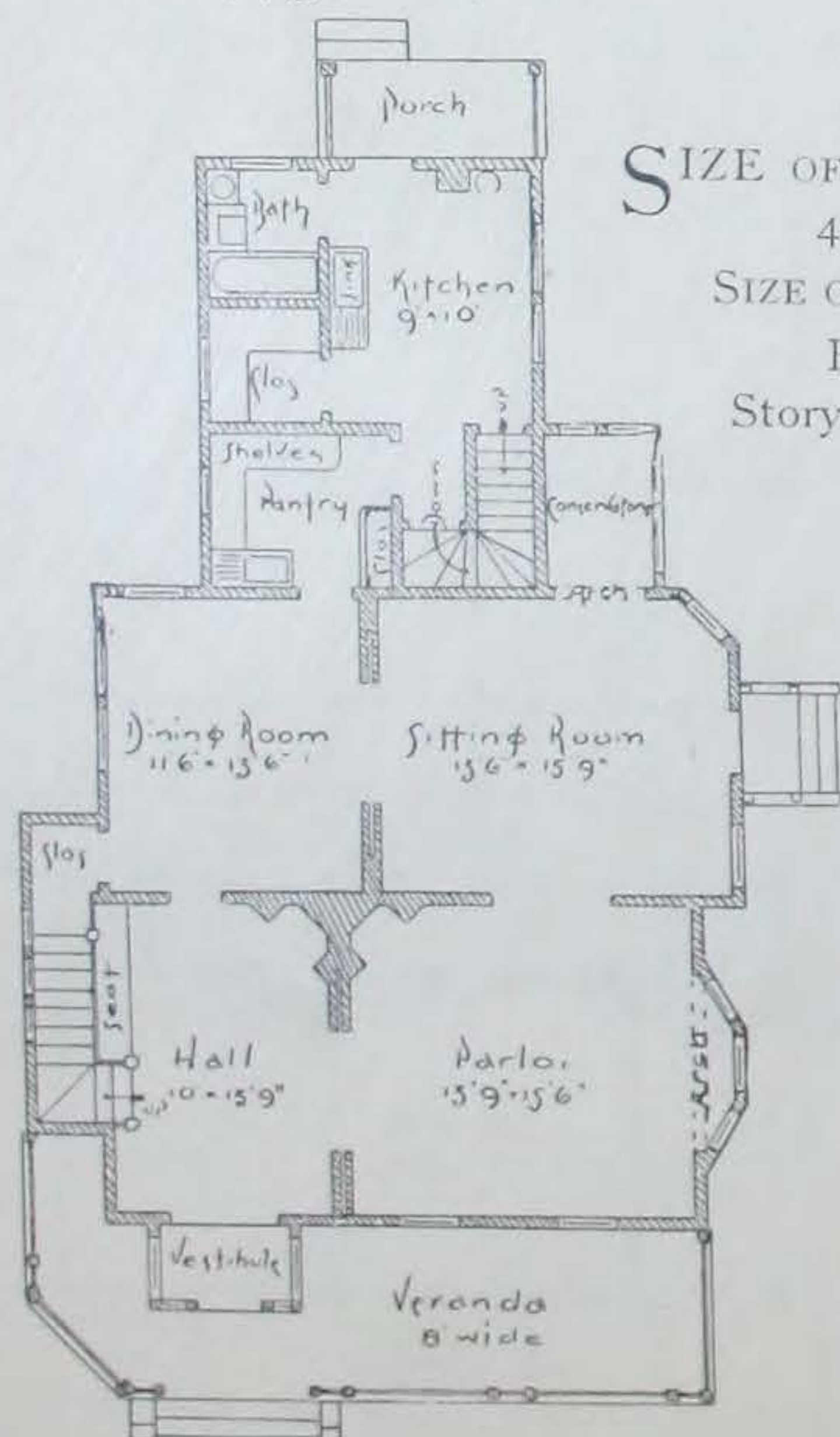
Sliding doors connect the principal rooms.

A small conservatory opens out from the sitting-room.

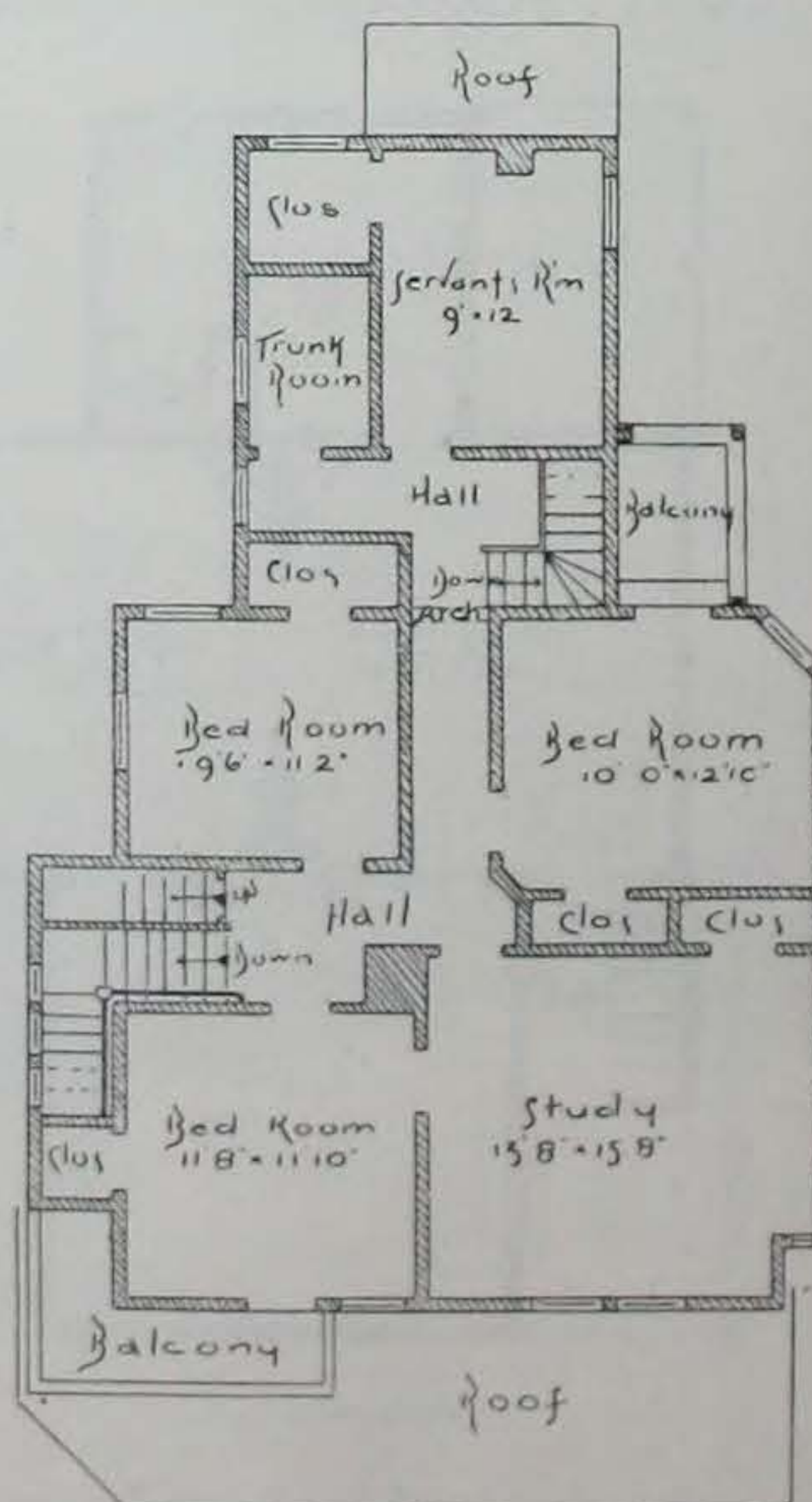
Large pantry and butler's pantry, making a large kitchen unnecessary.

Five bedrooms on the second floor. The attic is unfinished.

Cellar under the kitchen part only.



FIRST FLOOR. NO. 403



SECOND FLOOR. NO. 403



DESIGN No. 404 PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 404

SIZE OF STRUCTURE: Front, 30 ft., including veranda. Side, 67 ft., including veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 8 ft.; First Story, 10 ft.; Second Story, 9 ft.

MATERIALS: Foundation, stone; First Story, brick; Second Story, brick; Roof, slate.

COST: \$4,500, complete, except mantels, range and furnace.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

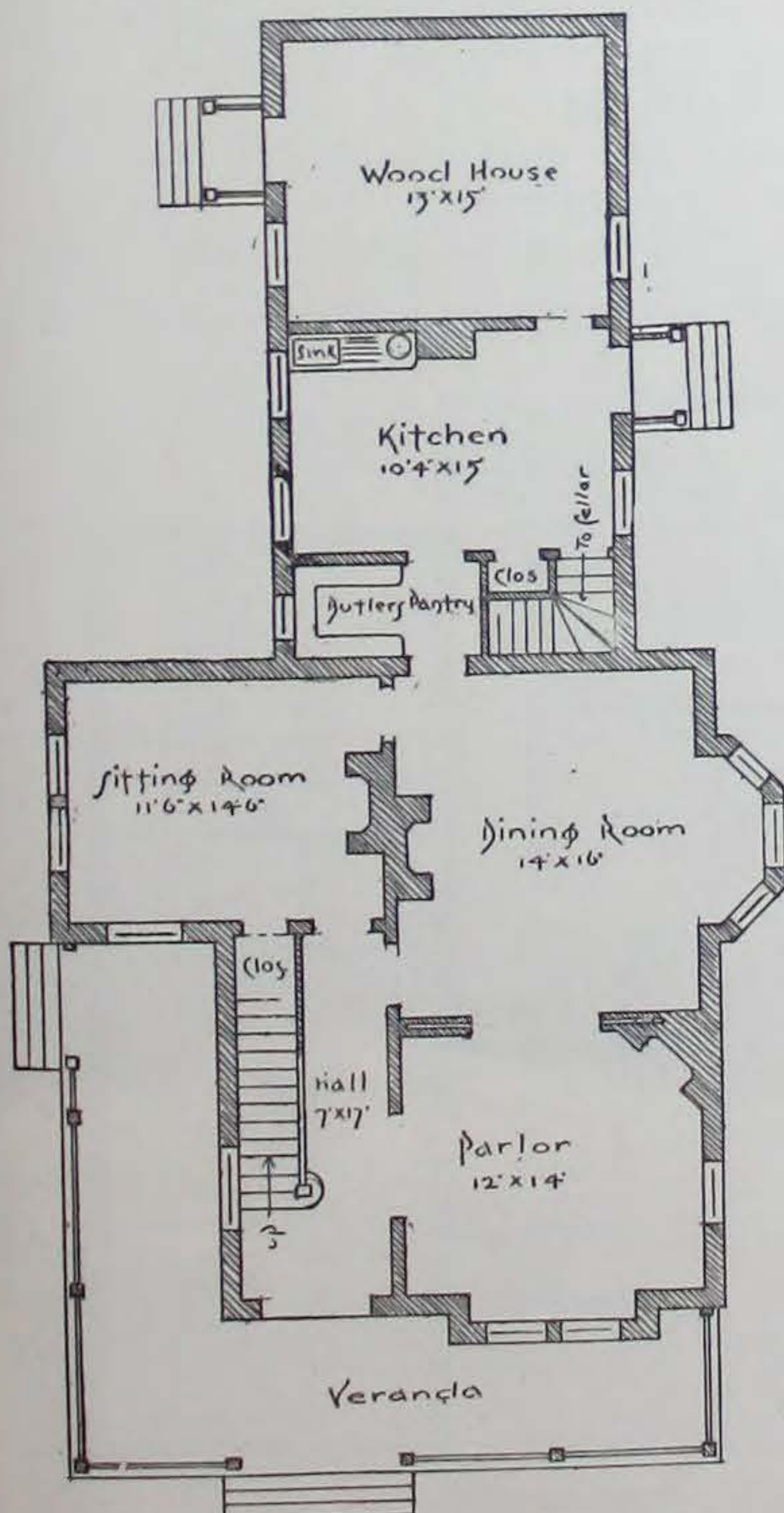
The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

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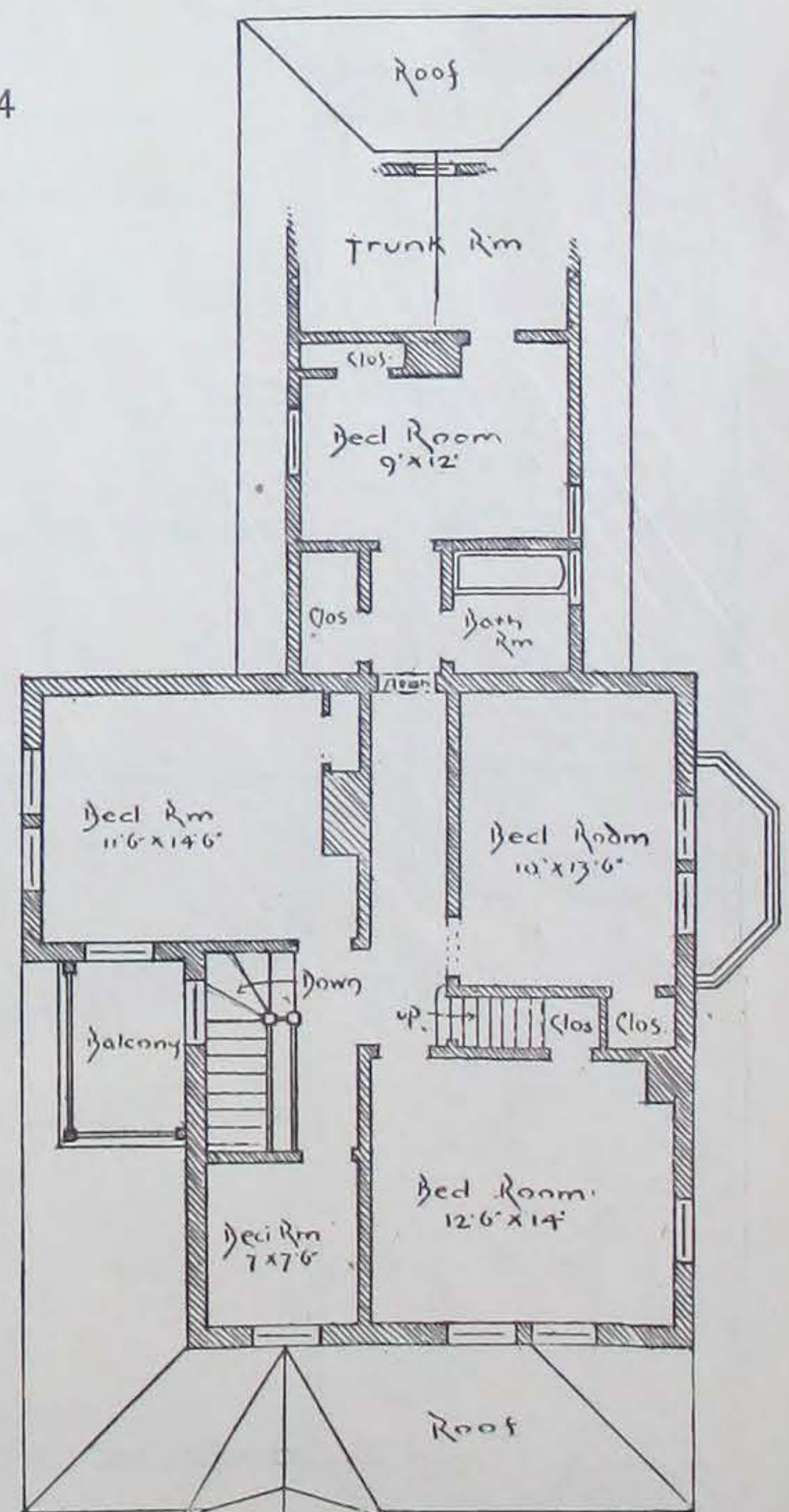
SPECIAL FEATURES.—A brick house. The walls are eight inches thick, solid, and are furred off on the inside so as to make an air space to prevent dampness coming through to the plaster. The attic is floored, but not finished otherwise. Cellar under the kitchen, sitting and dining-rooms.

Furnace pipes and registers are provided. The furnace itself is not included in our estimate.

A bath-tub on second floor; a water-closet can be added at an additional expense of about \$60.



FIRST FLOOR. NO. 404



SECOND FLOOR. NO. 404



DESIGN No. 405. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 405

SIZE OF STRUCTURE: Front, 34 ft., 6 in. Side, 62 ft., 8 in.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft., 6 in.; Second Story, 9 ft.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, clapboards; Gables, shingles; Roof, shingles.

COST: \$4,500, complete, except mantels, furnace and range.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—Designed particularly for a boarding-house at a winter resort. By enlarging the veranda, which can easily be done by

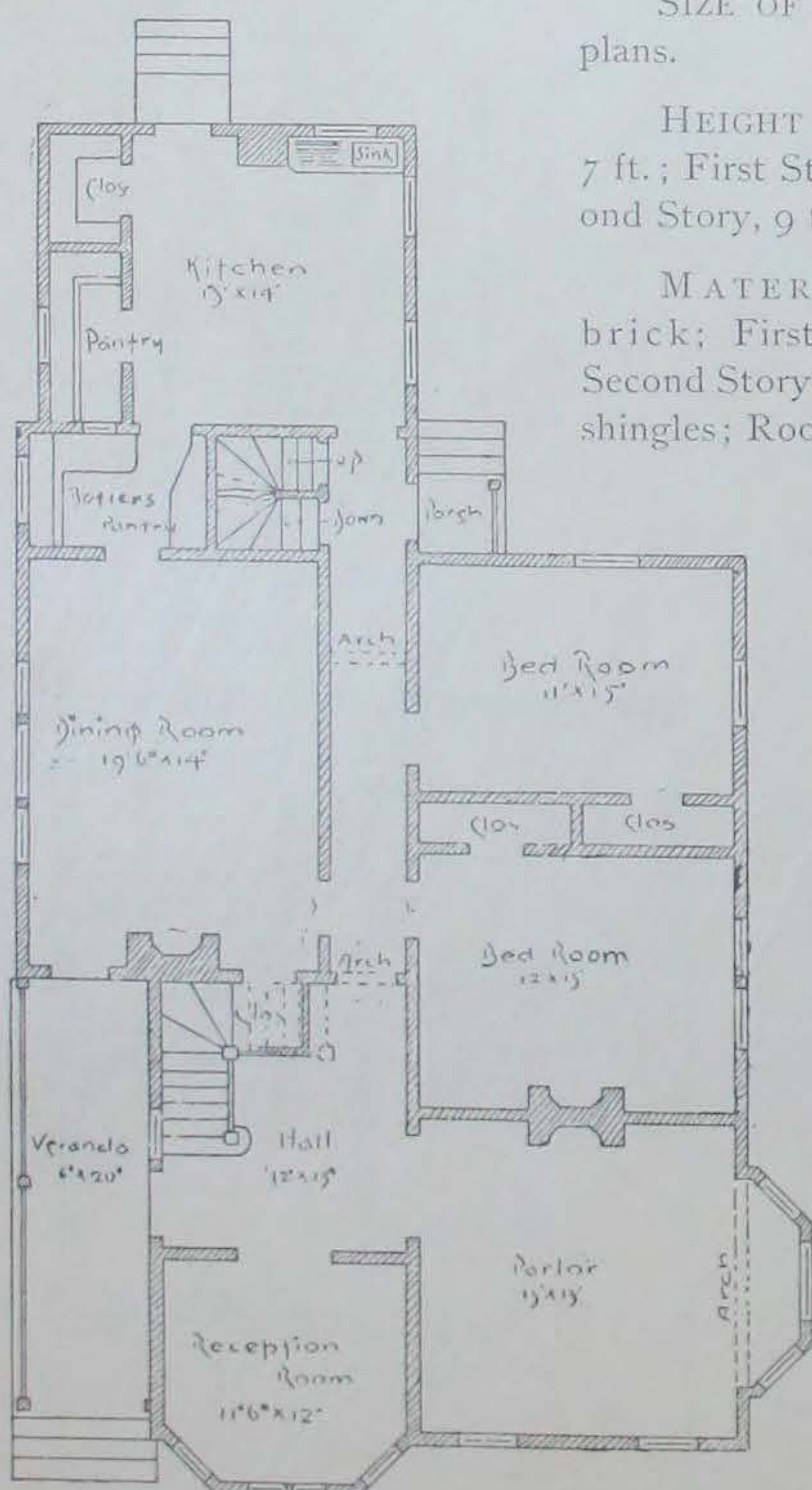
carrying it around the front and part of the other side, it makes an excellent summer boarding-house, or a private residence for a large family. In the latter case the bedroom back of the parlor should be connected with the front hall and the parlor and should be used for a library or a sitting-room.

There are eight bedrooms on the first and second floors and two in the attic. Storage room also in the attic.

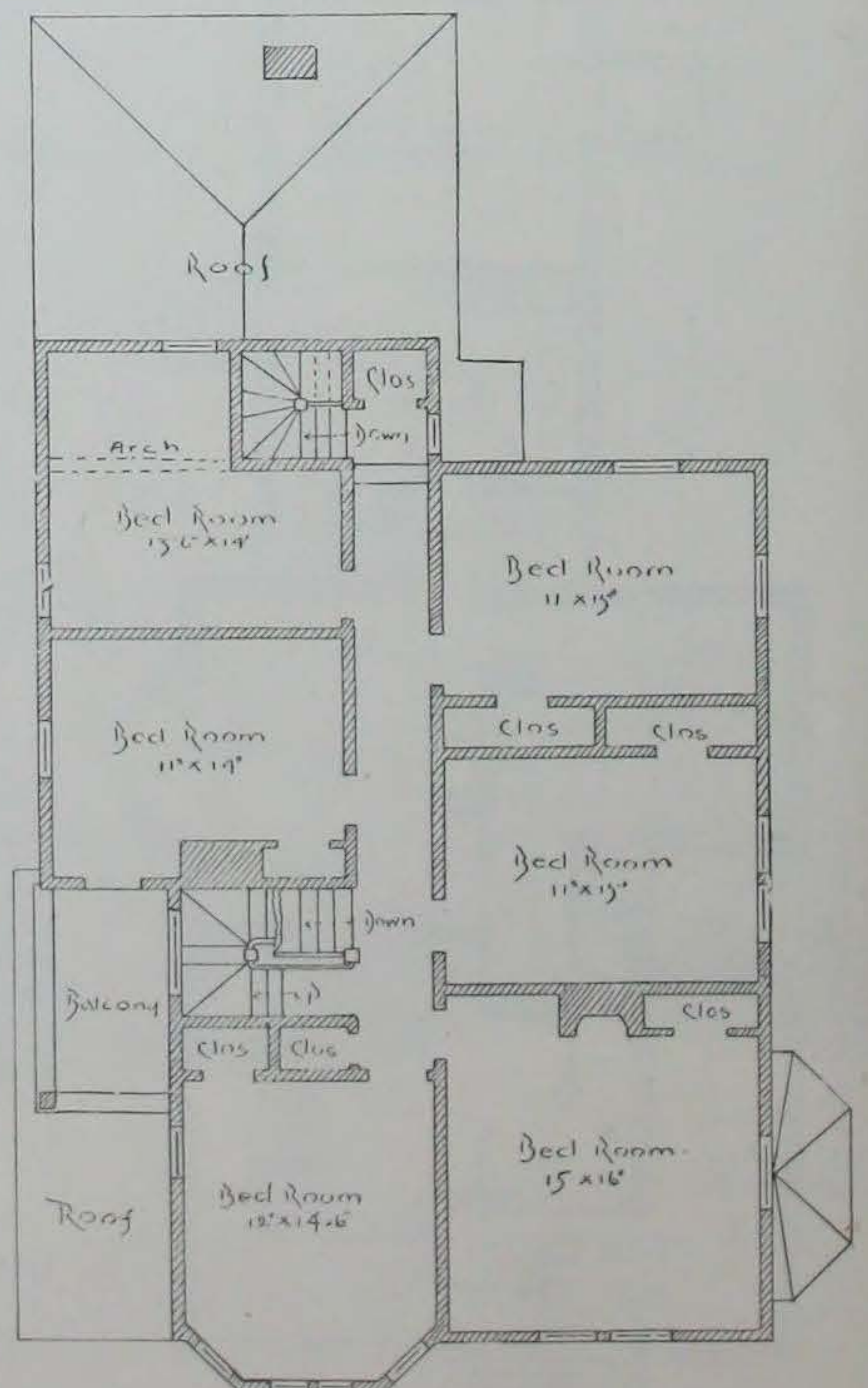
Cellar under the entire house except under kitchen.

Bath-room and plumbing can be added to the rear second story for \$250, additional.

If used as a summer cottage the cellar can be omitted, thus, saving in cost.



FIRST FLOOR, NO. 405



SECOND FLOOR, NO. 405



DESIGN No. 406. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 406

SIZE OF STRUCTURE: Front, 42 ft. Side, 49 ft., 4 in., not including front veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 10 ft.; Second Story, 9 ft.

MATERIALS: Foundation, brick piers; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

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This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

COST: \$3,600, complete, except mantels.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

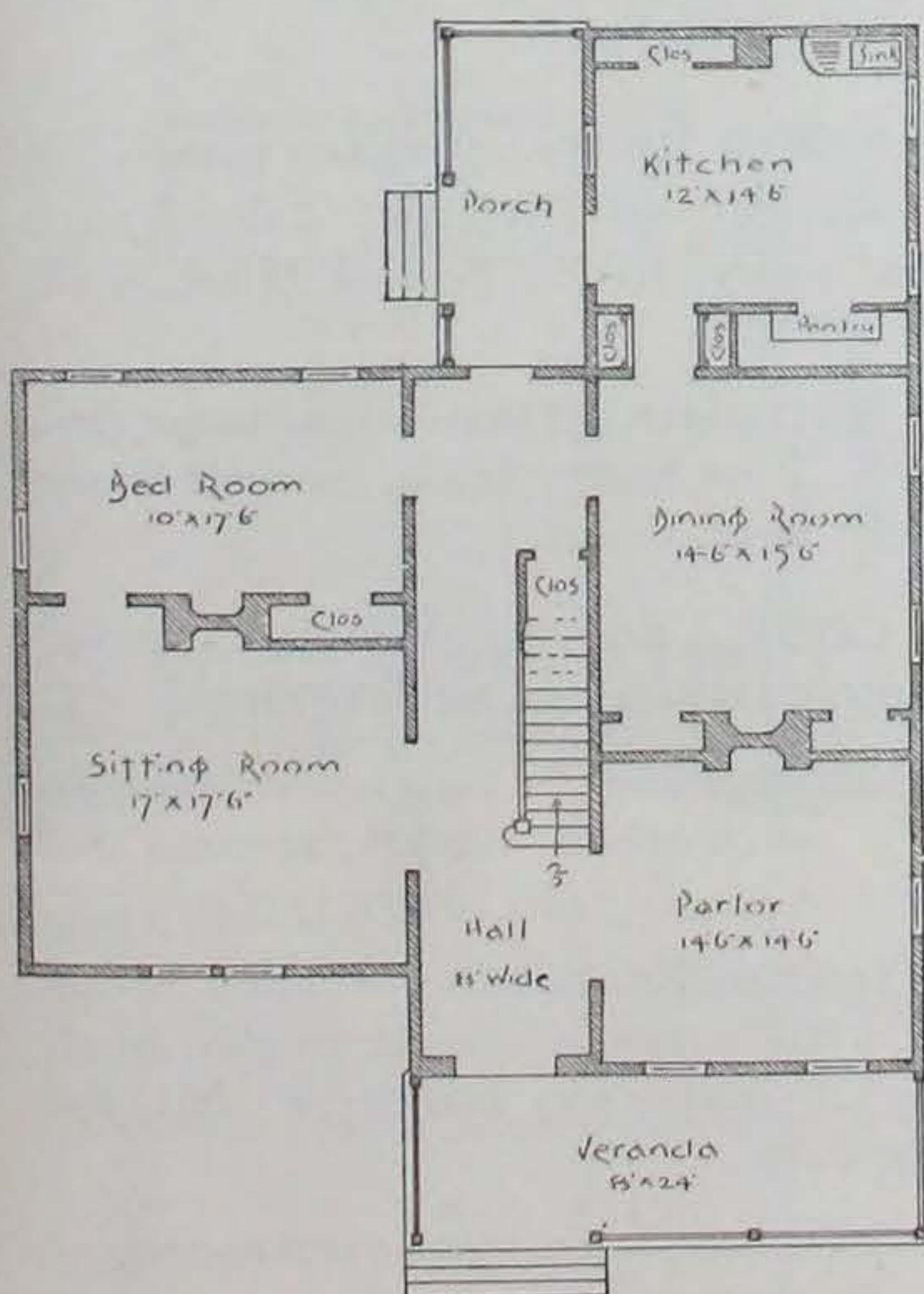
The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

SPECIAL FEATURES.—The hall through the centre of the house from front to rear, insuring ventilation in hot weather.

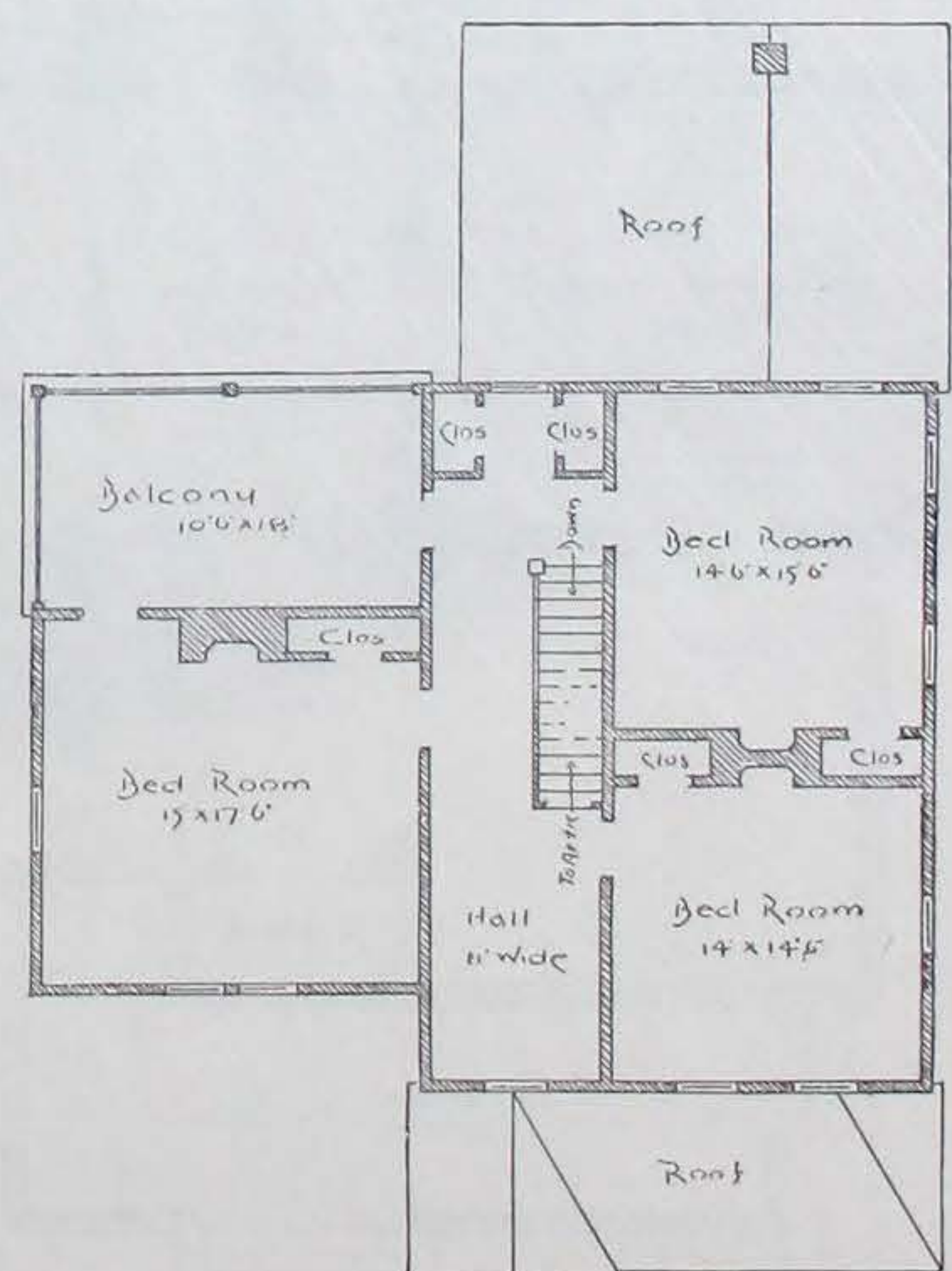
No cellar; the house is set on brick piers.

Open fire-places in first and second stories. The deep balcony at the rear of second story, overhung by the main roof gives a place for observation and for lounging.

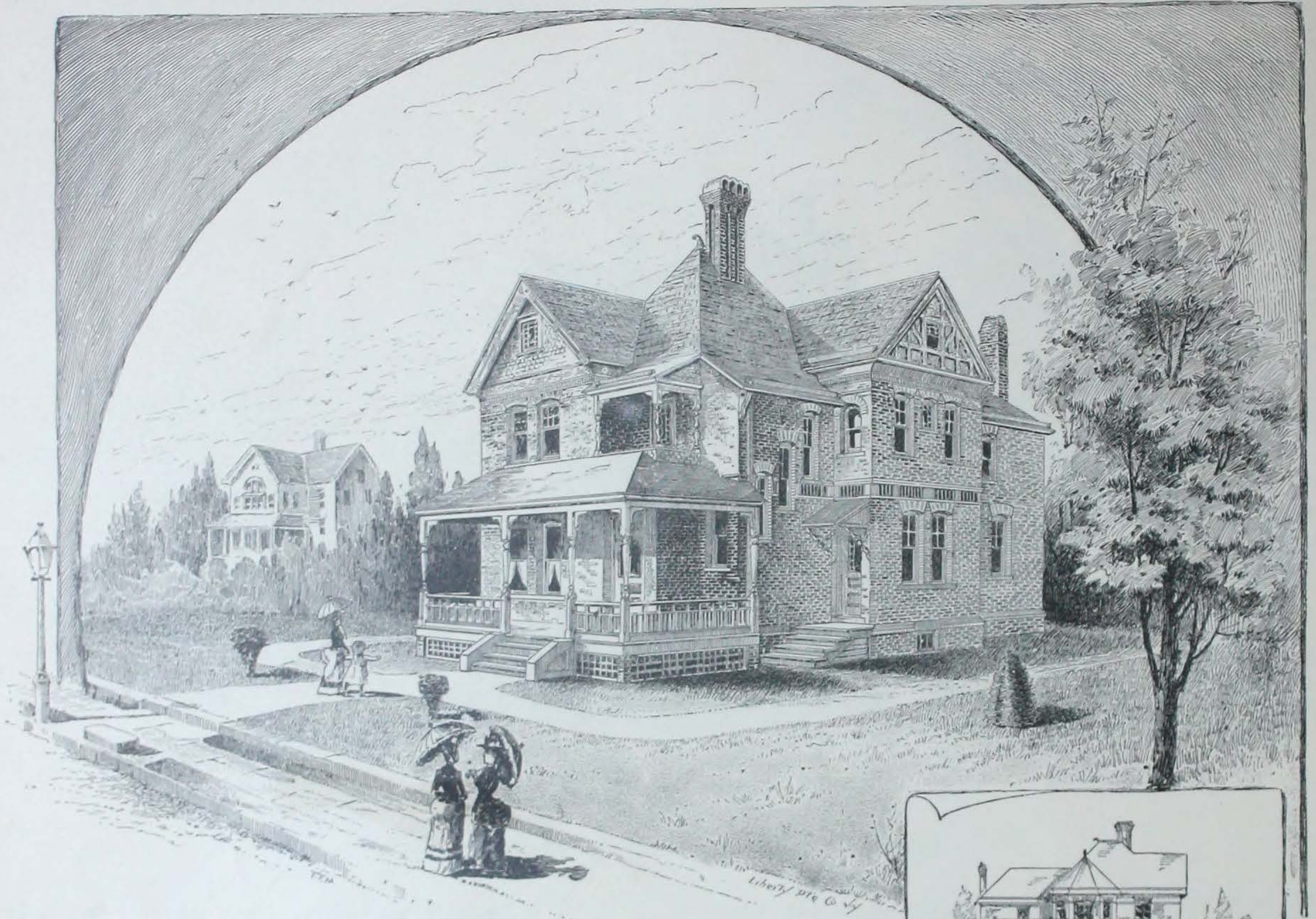
The attic is not finished.



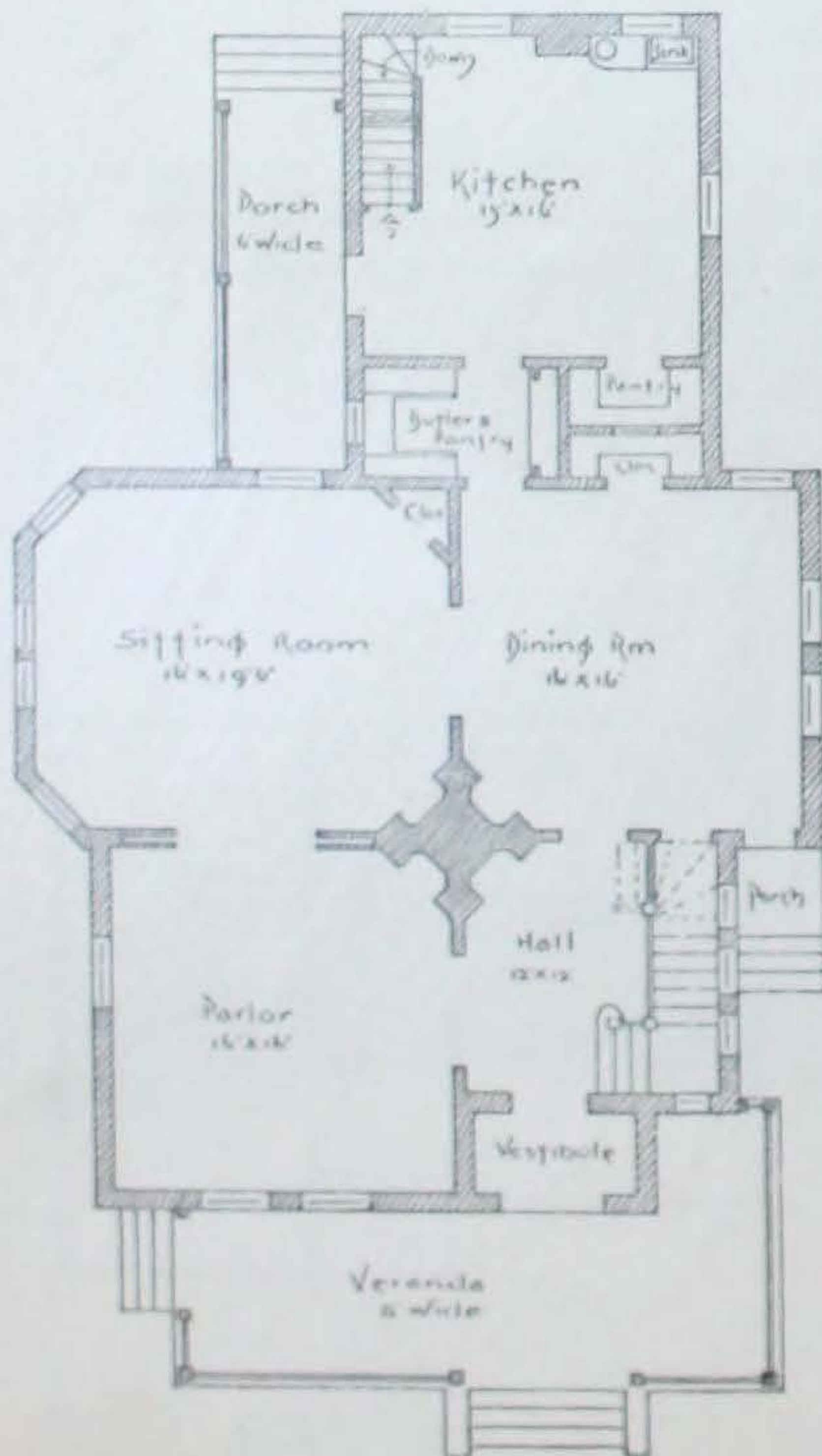
FIRST FLOOR, NO. 406



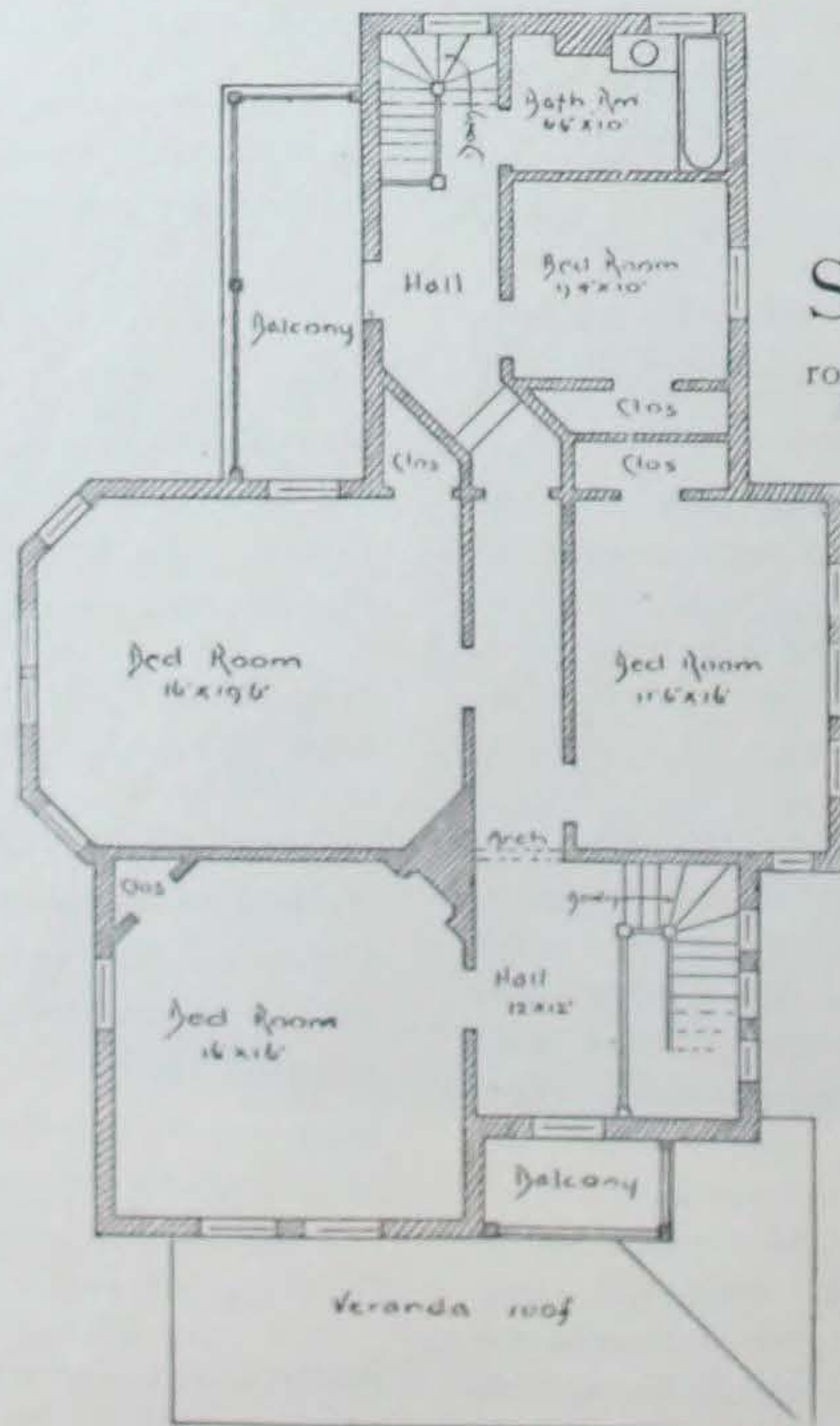
SECOND FLOOR, NO. 406



DESIGN No. 407. PERSPECTIVE VIEW



FIRST FLOOR. NO. 407



SECOND FLOOR. NO. 407

DESCRIPTION OF DESIGN
NUMBER 407

SIZE OF STRUCTURE: Front, 26 ft., 2 in.; extreme width through sitting and dining-rooms, 38 ft. Side, 56 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft., 6 in.

MATERIALS: Foundation, stone and brick; First Story, brick; Second Story, brick; Roof, slate.

COST: \$6,000, complete, except mantels, furnace and kitchen range.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—A brick house, the walls furred off inside to give an air space between the brickwork and the plastering.

Open fire-places. Attic unfinished.

Cellar under kitchen, sitting and dining-rooms.



DESIGN No. 408. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 408

SIZE OF STRUCTURE: Front, 27 ft.; extreme width, 32 ft. Side, 53 ft., 6 in., not including veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 10 ft.; Second Story, 9 ft.; Attic Story, 7 ft.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$3,800, complete, except mantels.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

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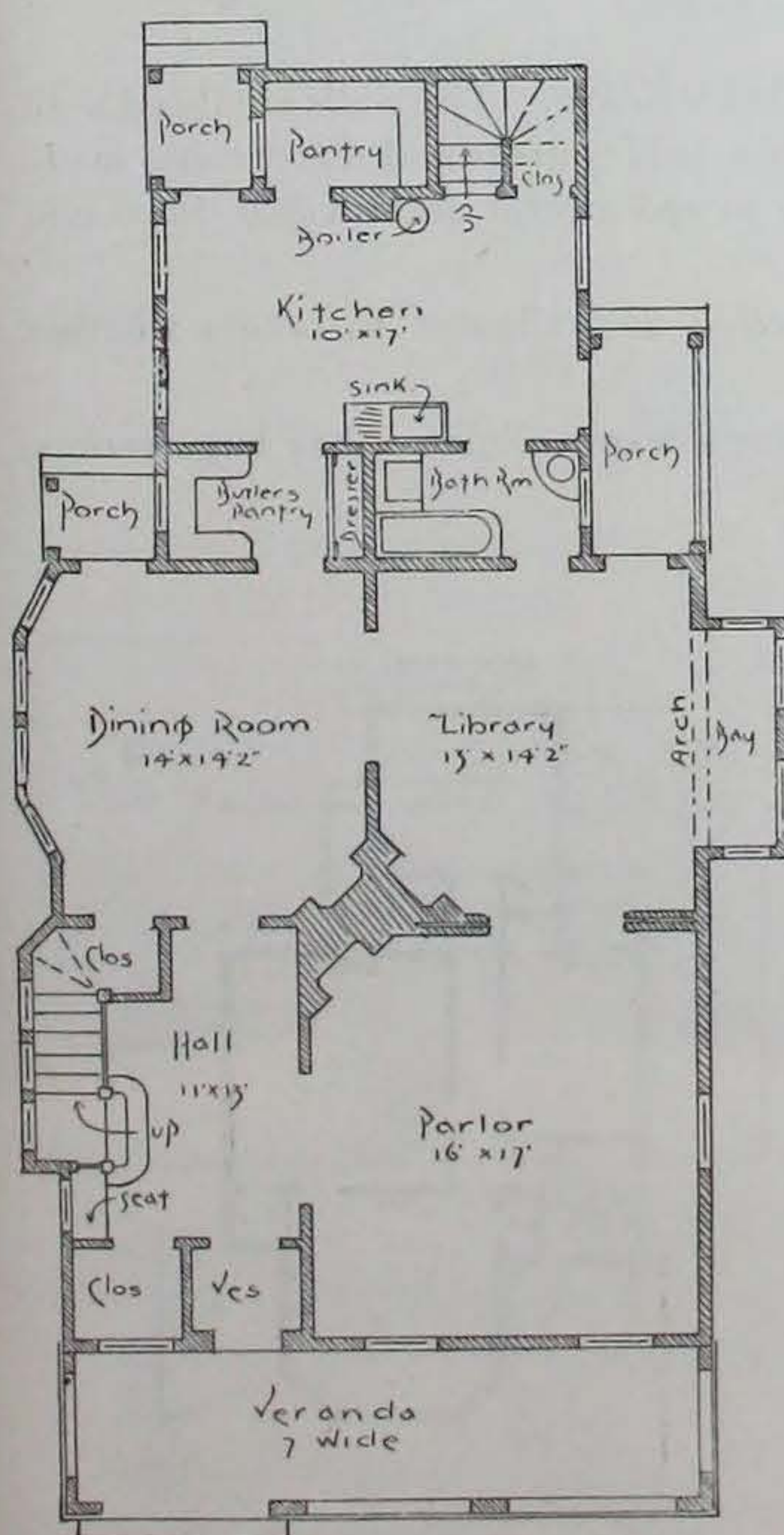
This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

SPECIAL FEATURES.—The bath-room can be placed on the second floor, over the kitchen, if preferred.

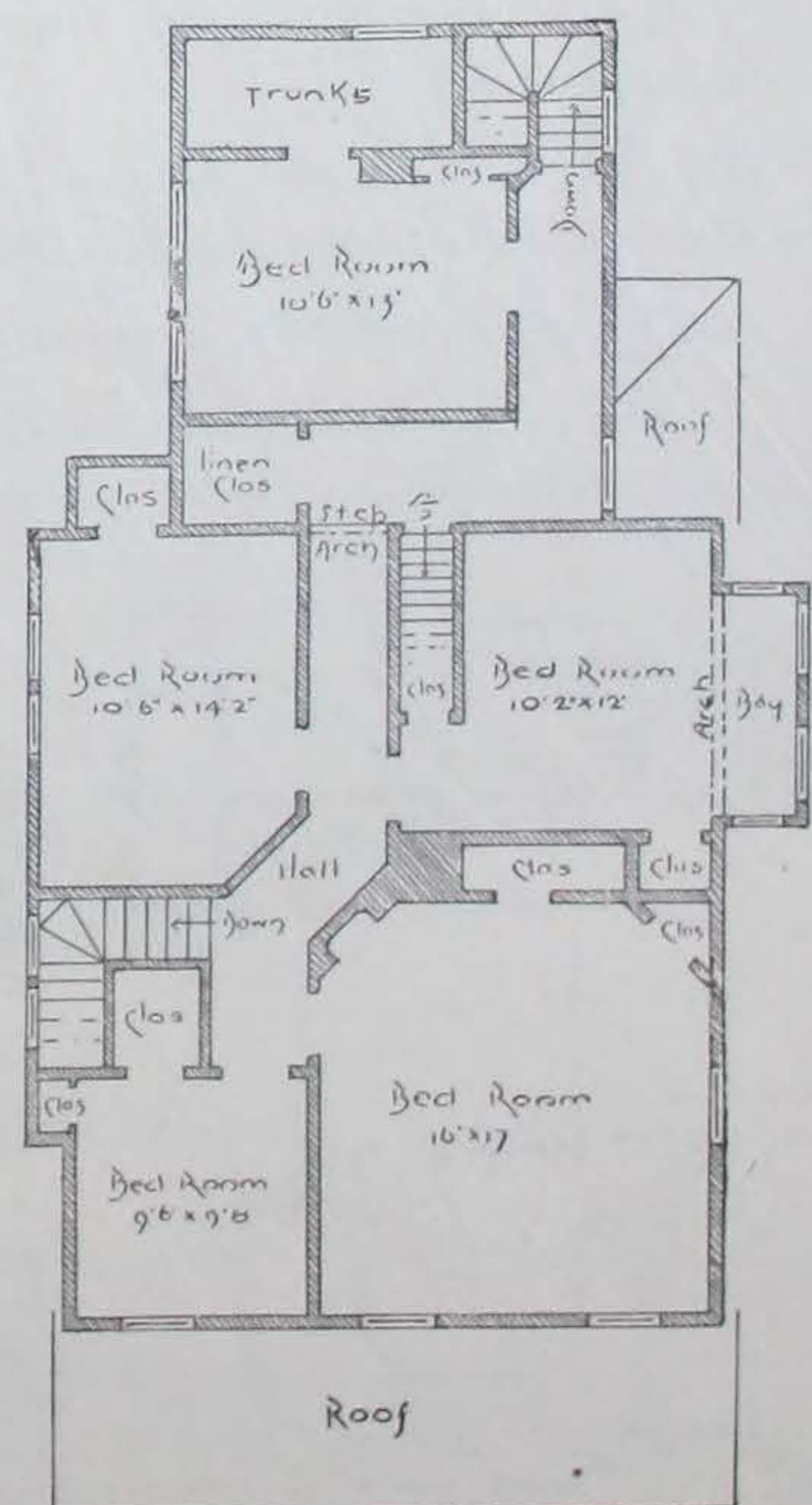
Two good bedrooms in the attic.

There is no cellar. This house was designed for a location at the sea-side where excavation of sufficient depth for a good cellar was impossible. There was little or no use for a cellar as the house is tenanted during the summer months only. The house is set on brick walls sunk to a depth of three feet below grade.

If a cellar is wanted, say under the whole house, the additional cost for excavating and building the foundation walls to a greater depth would be about \$200.



FIRST FLOOR, NO. 408



SECOND FLOOR, NO. 408



DESIGN No. 409. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 409

SIZE OF STRUCTURE: Front, 28 ft., 4 in. Extreme width, including verandas, 53 ft. Side, 68 ft., including front veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 11 ft., 6 in.; Second Story, 11 ft.

MATERIALS: Foundation, stone and brick; First Story, brick; Second Story, brick; Gables, shingled; Roof, shingles.

COST; \$6,500, complete, except mantels.

[See page 219 for information about details, specifications, bill of quantities, and working plans of this design.]

ings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality,

SPECIAL FEATURES.—A brick house. The walls are faced with select stock brick, and the arches, belt courses and water table made with pressed brick; all laid up in red mortar and washed down and oiled at completion.

The shingling is simply oiled and allowed to take a weather stain.

This house was designed for a warm climate; has large rooms, high stories and wide verandas.

The rear hall, separated from the front hall by a portiere, makes a music-room or library. One window in this room goes down to the floor to afford access to the veranda.

Stained cathedral glass in the staircase windows and in the window at the side of the vestibule door.

The large bedroom on the ground floor, connected with a dressing-room and a bathroom, is a desirable feature under some circumstances.

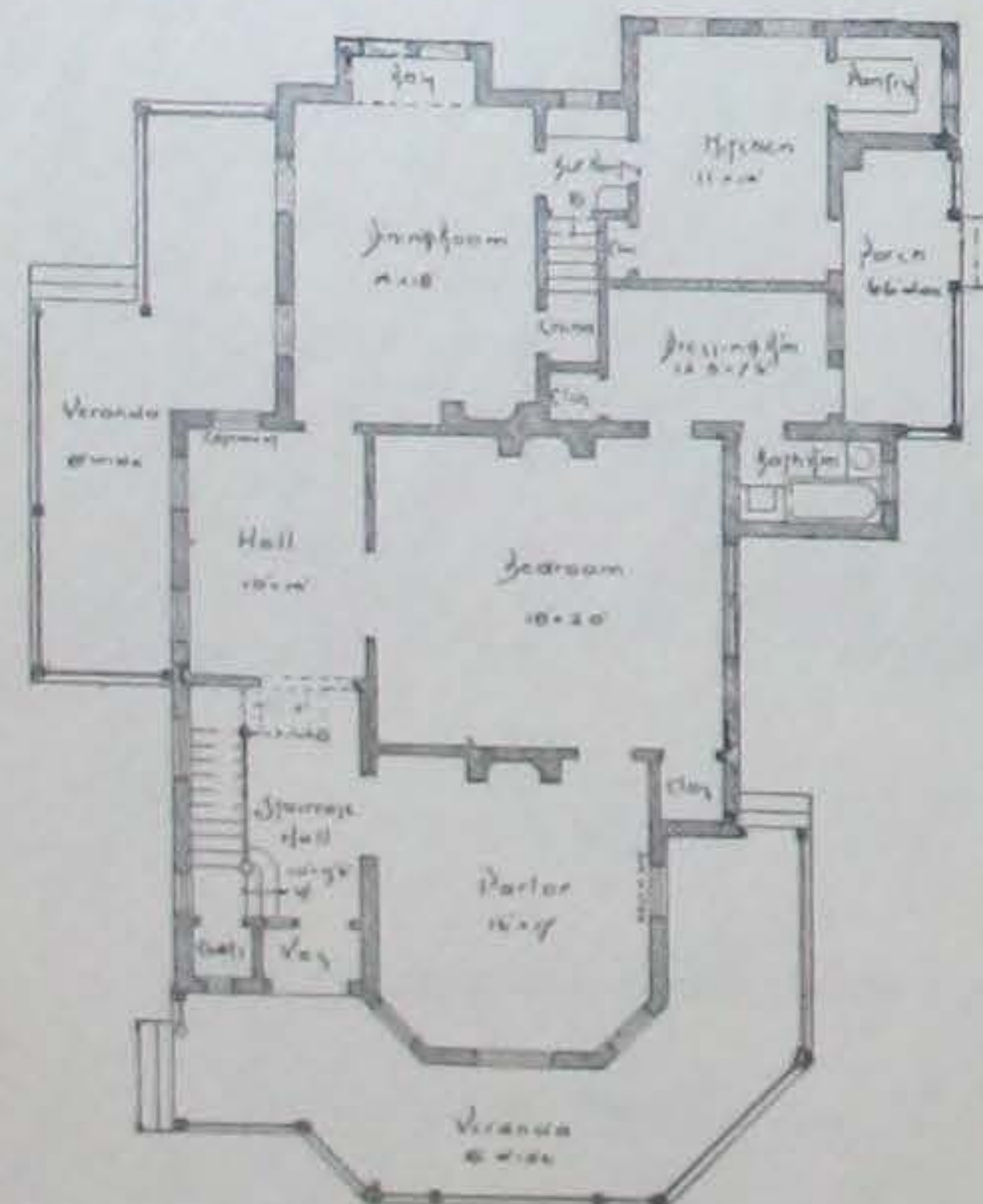
The attic is available for storage only.

Cellar under front portion of the house.

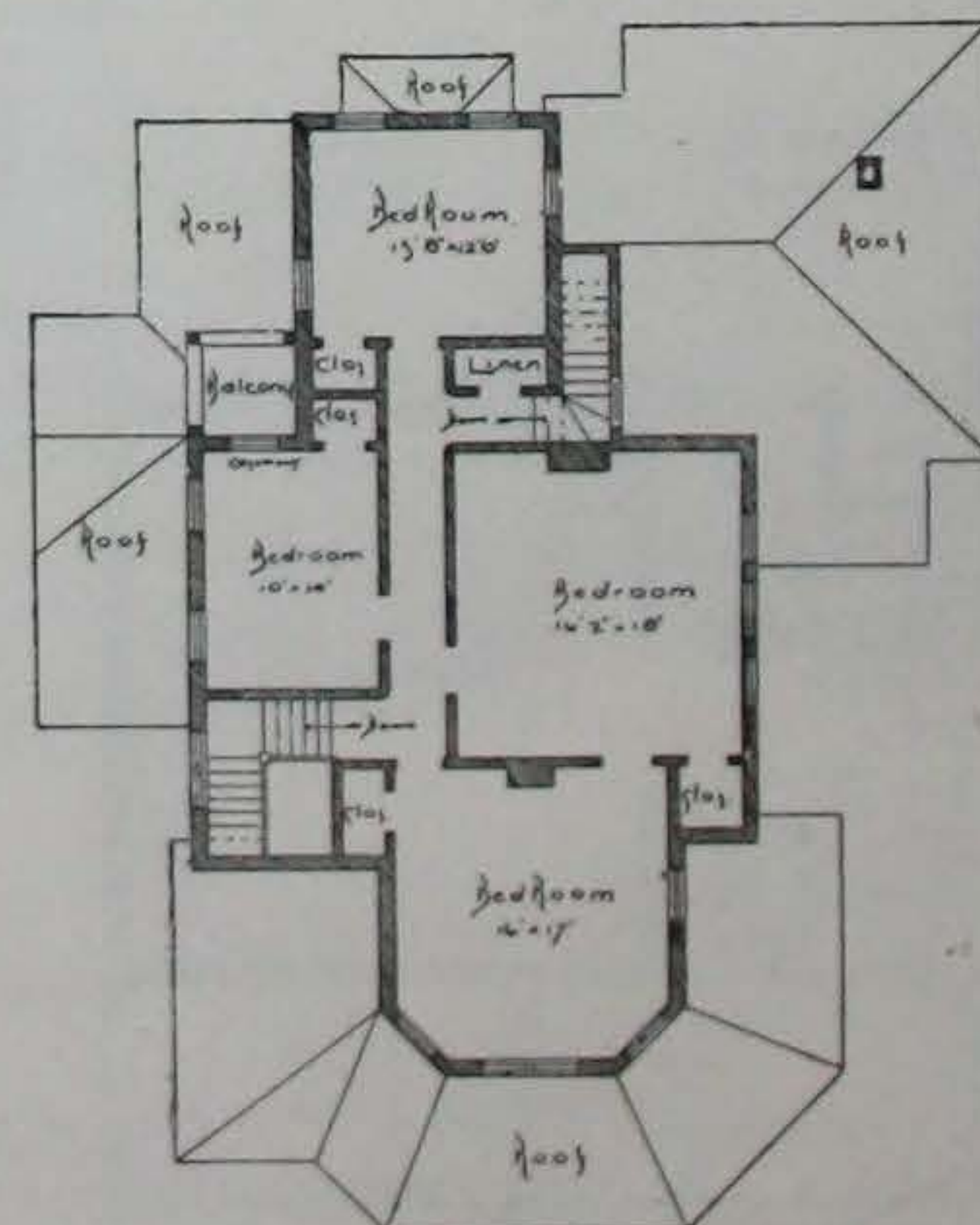
NOTES

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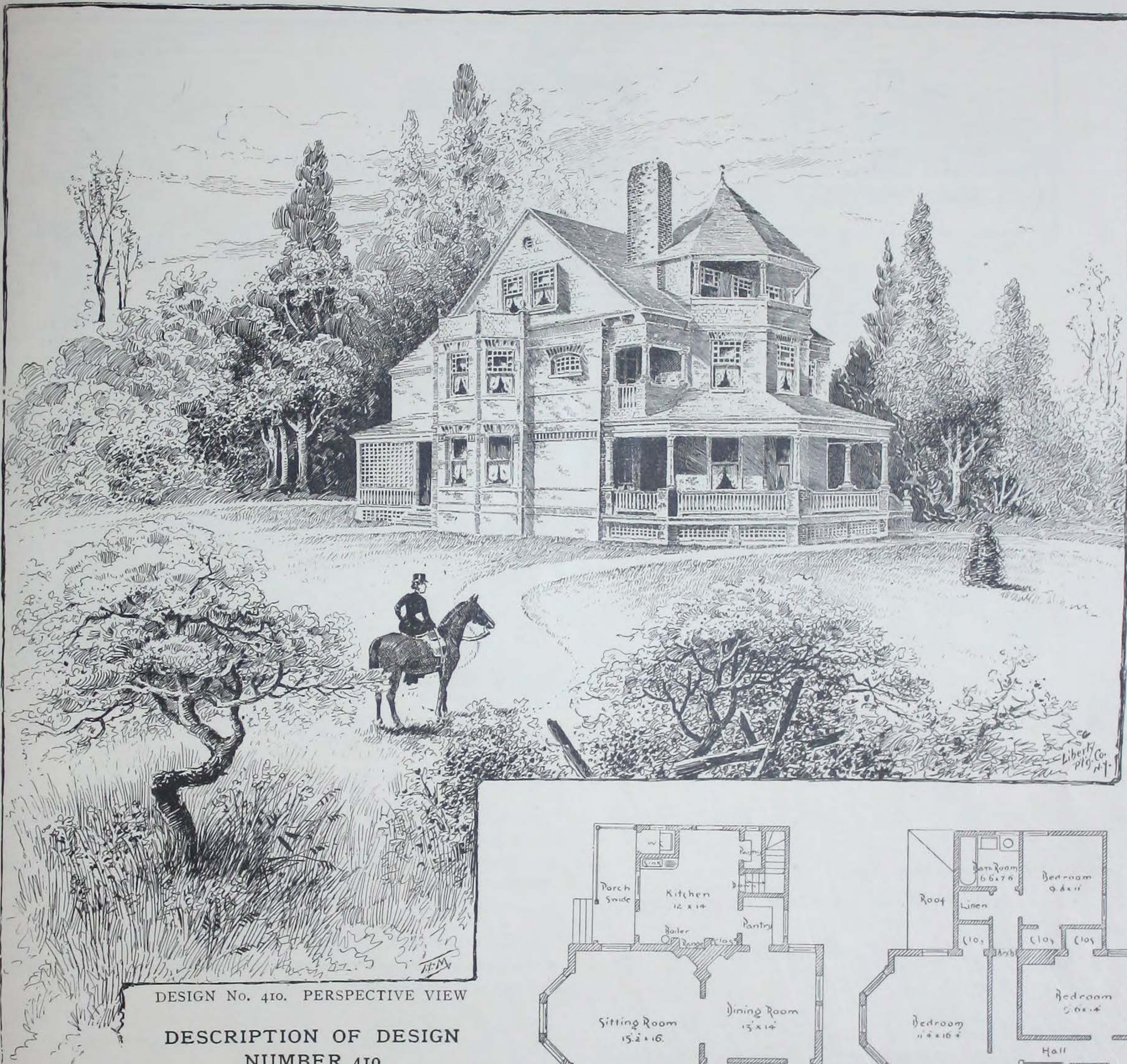
Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Draw-



FIRST FLOOR. NO. 409.



SECOND FLOOR. NO. 409



SIZE OF STRUCTURE: Front, 31 ft., 4 in. Side, 54 ft., including front veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft., 6 in.; Second Story, 8 ft., 6 in.; Attic Story, 7 ft., 6 in.

MATERIALS: Foundation, stone and brick; First Story, brick; Second Story, brick; Gables, shingles; Roof, slate.

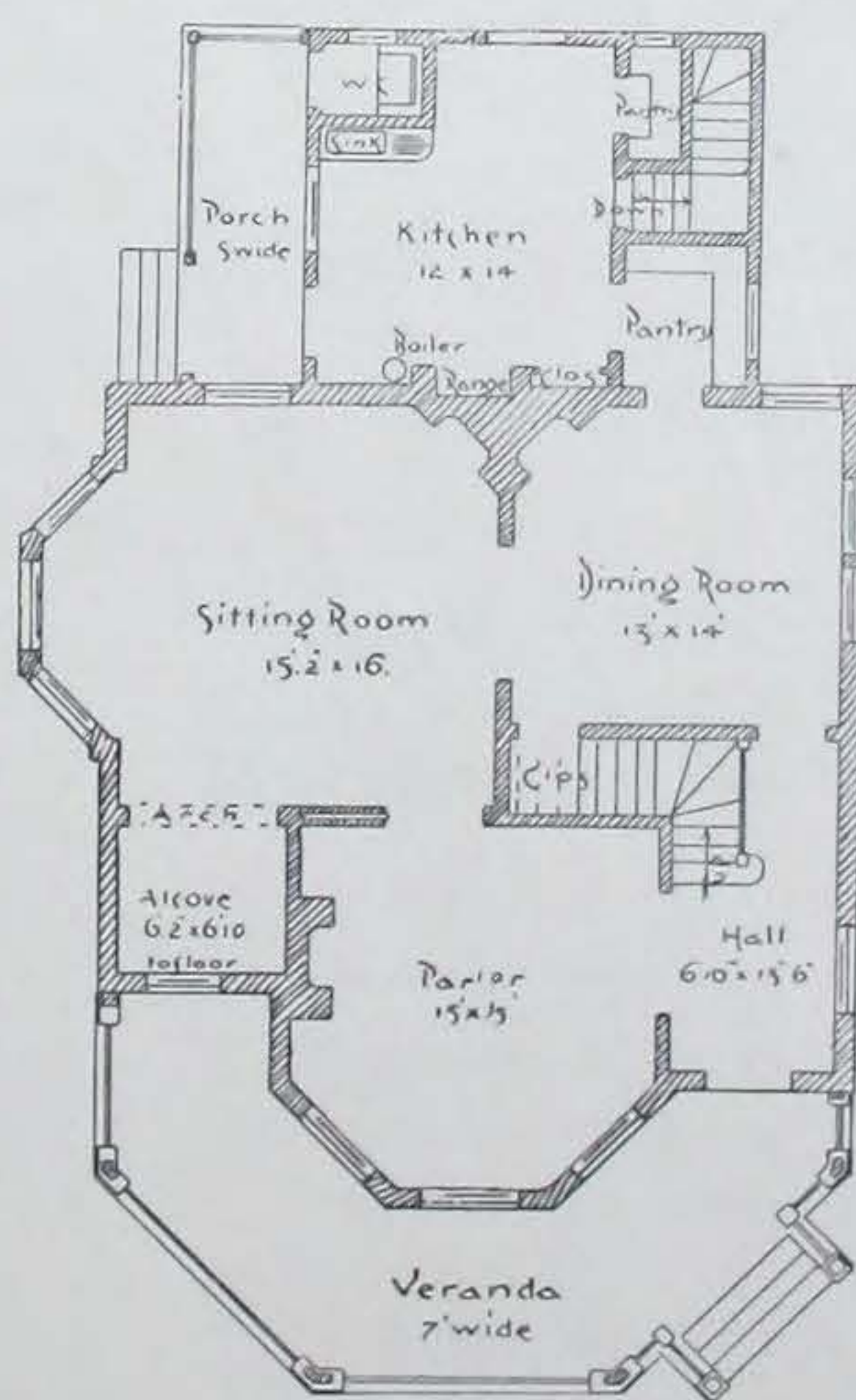
COST: \$4,500, complete, except mantels and range.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

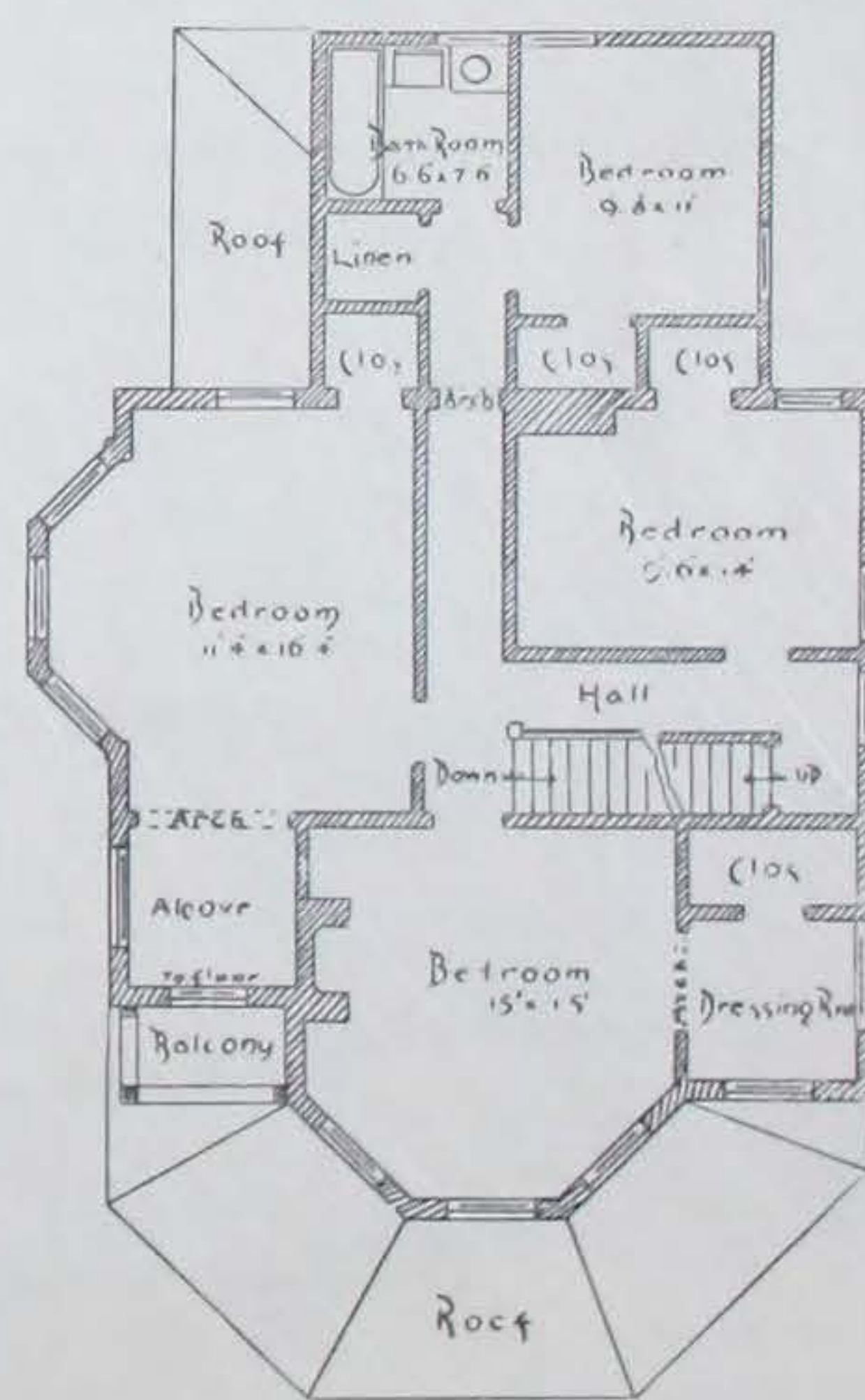
SPECIAL FEATURES.—A brick house. The walls are faced with select stock brick; trimmings of pressed brick.

Open fire-places in parlor, sitting-room, dining-room and front bed-room.

A sliding door connects the parlor and sitting-room; double folding doors connect the sitting and dining-room.



FIRST FLOOR. NO. 410



SECOND FLOOR. NO. 410

The rear porch is enclosed with lattice to seclude the entrance to the servants' W. C.

Four bedrooms and large closets in the second story; balcony over the veranda.

Two rooms and the hall are finished in the attic; the front room has a door giving access to the open balcony.

Cellar under the kitchen only.



DESIGN No. 411. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 411

SIZE OF STRUCTURE: Front, 29 ft., 6 in., not including veranda.
Side, 49 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 9 ft., 4 in.;
Second Story, 8 ft., 4 in.

MATERIALS: Foundation, stone; First Story, clapboards;
Second Story, clapboards; Roof, shingles.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced, or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

COST: \$4,700, complete, except mantels and heating apparatus.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, Sept., 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

SPECIAL FEATURES.—A large fine hall, with fireplace. The principal rooms are connected by sliding doors.

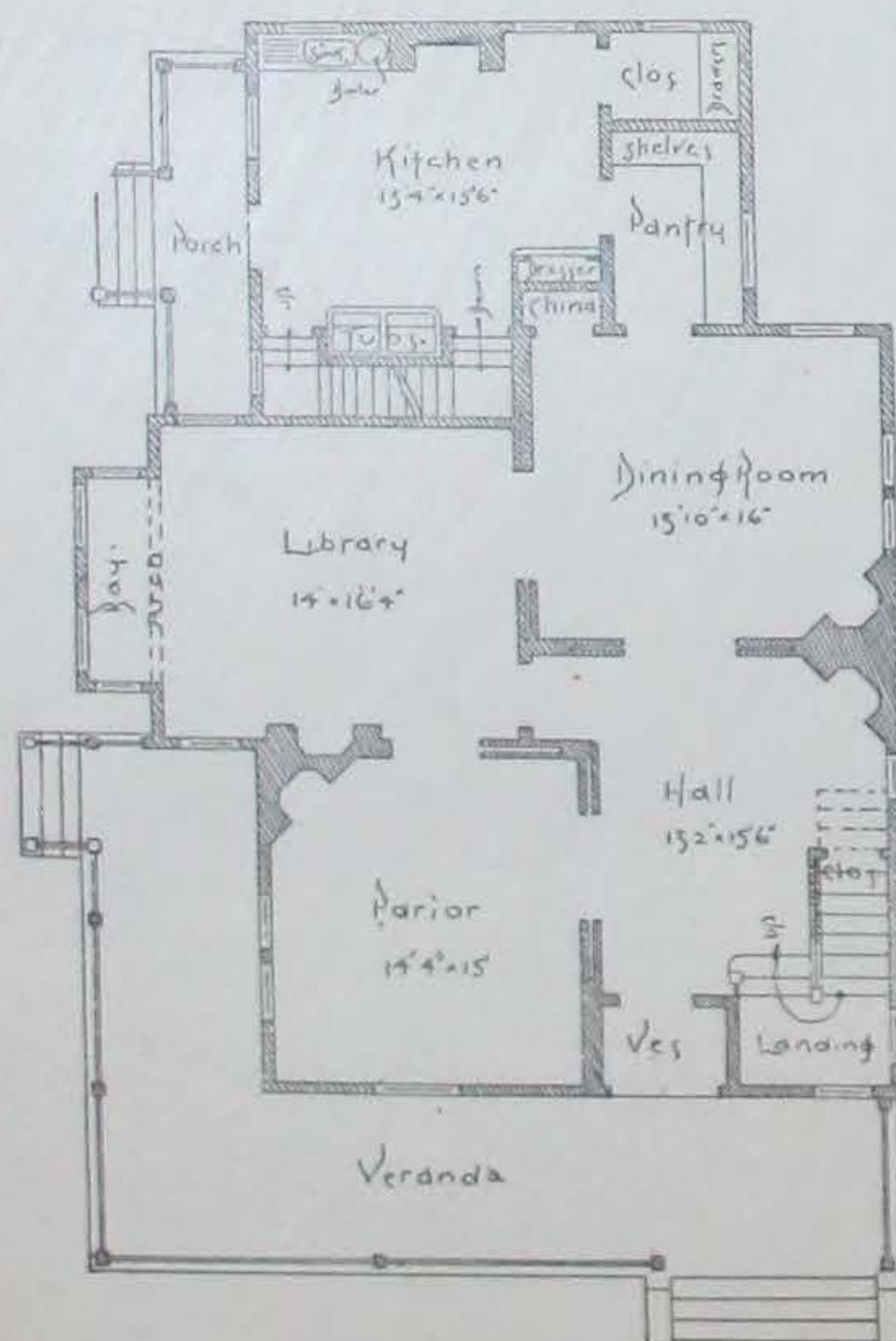
The two library windows which open onto the front and rear porches are carried to the floor.

Open fire-places in all the principal rooms.

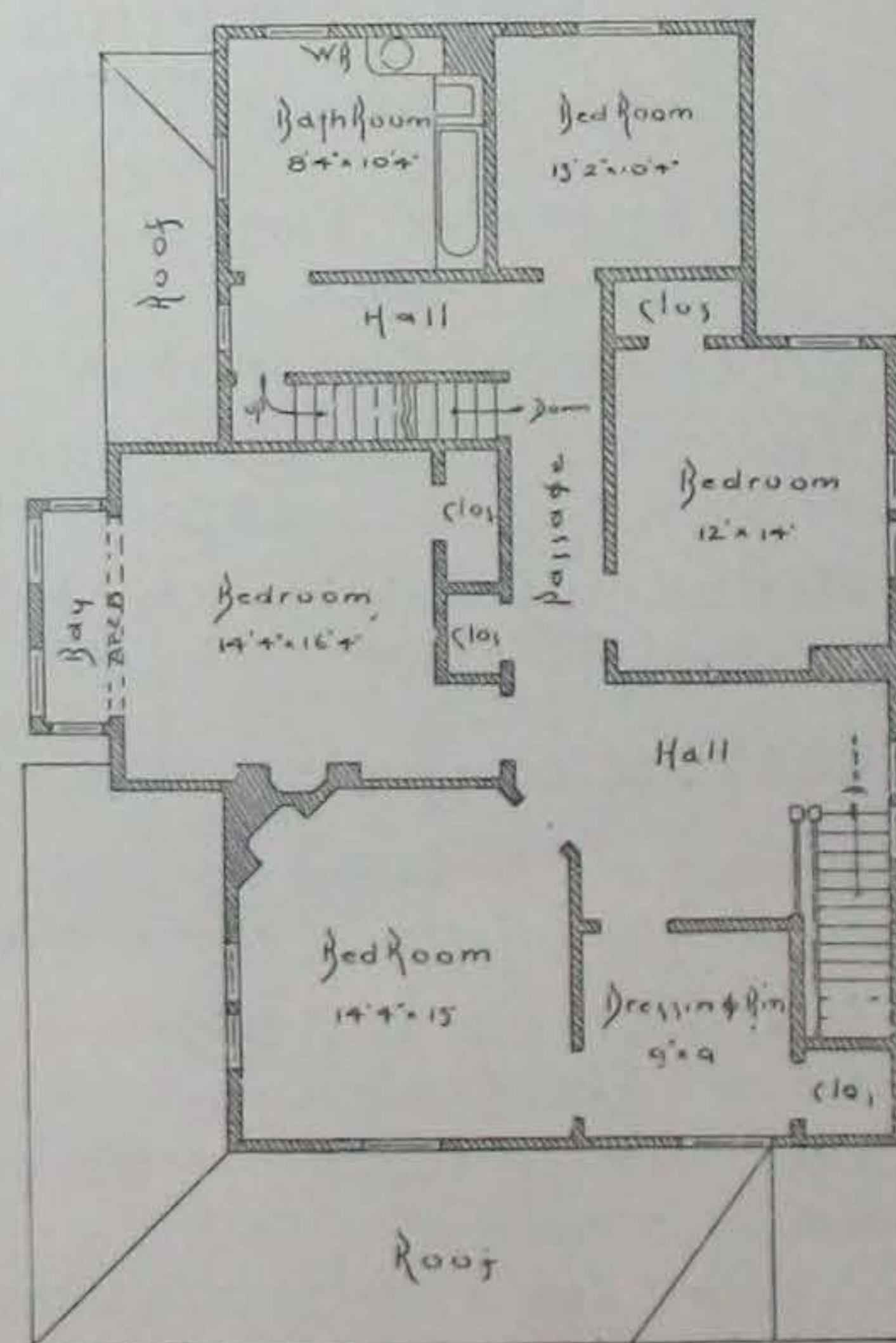
The bay window is 3 ft. by 9 ft., inside measurement.

Large pantry and butler's pantry. Veranda 8 ft. wide.

Cellar under the whole house, with outside entrance to the same. Attic is unfinished.



FIRST FLOOR. NO. 411



SECOND FLOOR. NO. 411



DESIGN No. 412. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 412

SIZE OF STRUCTURE: Front, 37 ft., not including veranda. Side, 44 ft. 6 in., not including veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft.

MATERIALS: Foundation, brick; First Story, clapboards; Second Story, shingles; Roof, shingles.

COST: \$4,800, complete, except mantels, range and furnace.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, &c., &c., (these constitute the principal and distinguishing beauty of modern houses,) are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.

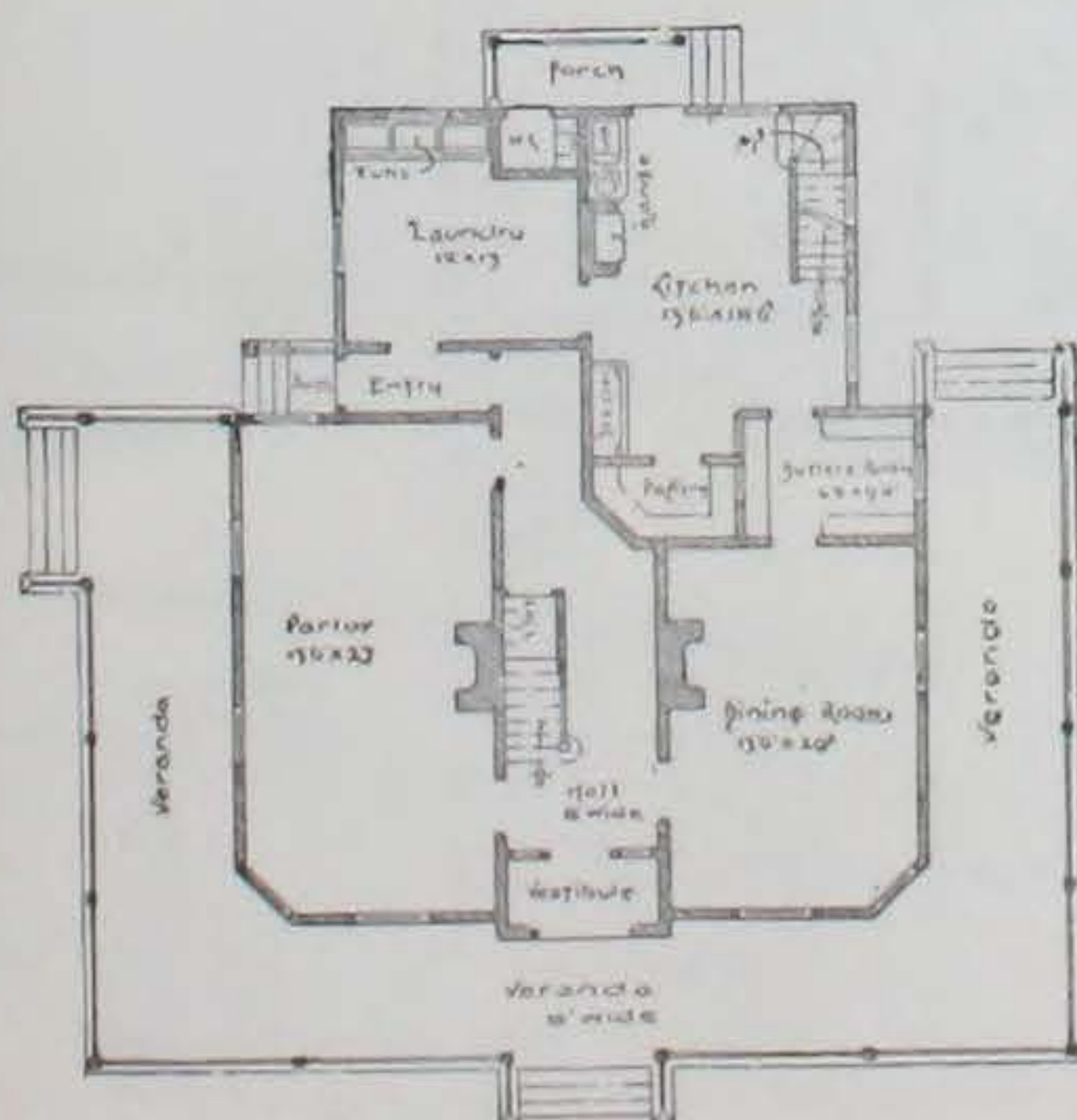
SPECIAL FEATURES.—The kitchen is thoroughly isolated from the rest of the house by the side entry and laundry, and by the butler's pantry. From the latter there are two windows, one opening into the pantry and the other into the kitchen. These are not glazed but are fitted with wire gauze. When the butler's pantry window is open, as it is in summer weather, an air current passes through the butler's pantry, into and through the pantry, and into and through the kitchen. This arrangement thoroughly ventilates this part of the house and is calculated to prevent flies from passing through to the front rooms.

The cross hall or passage on the second floor connected with the front hall, causes a draught that passes by the doors of all the chambers, and we believe, insures their coolness and comfort in the most oppressively hot weather.

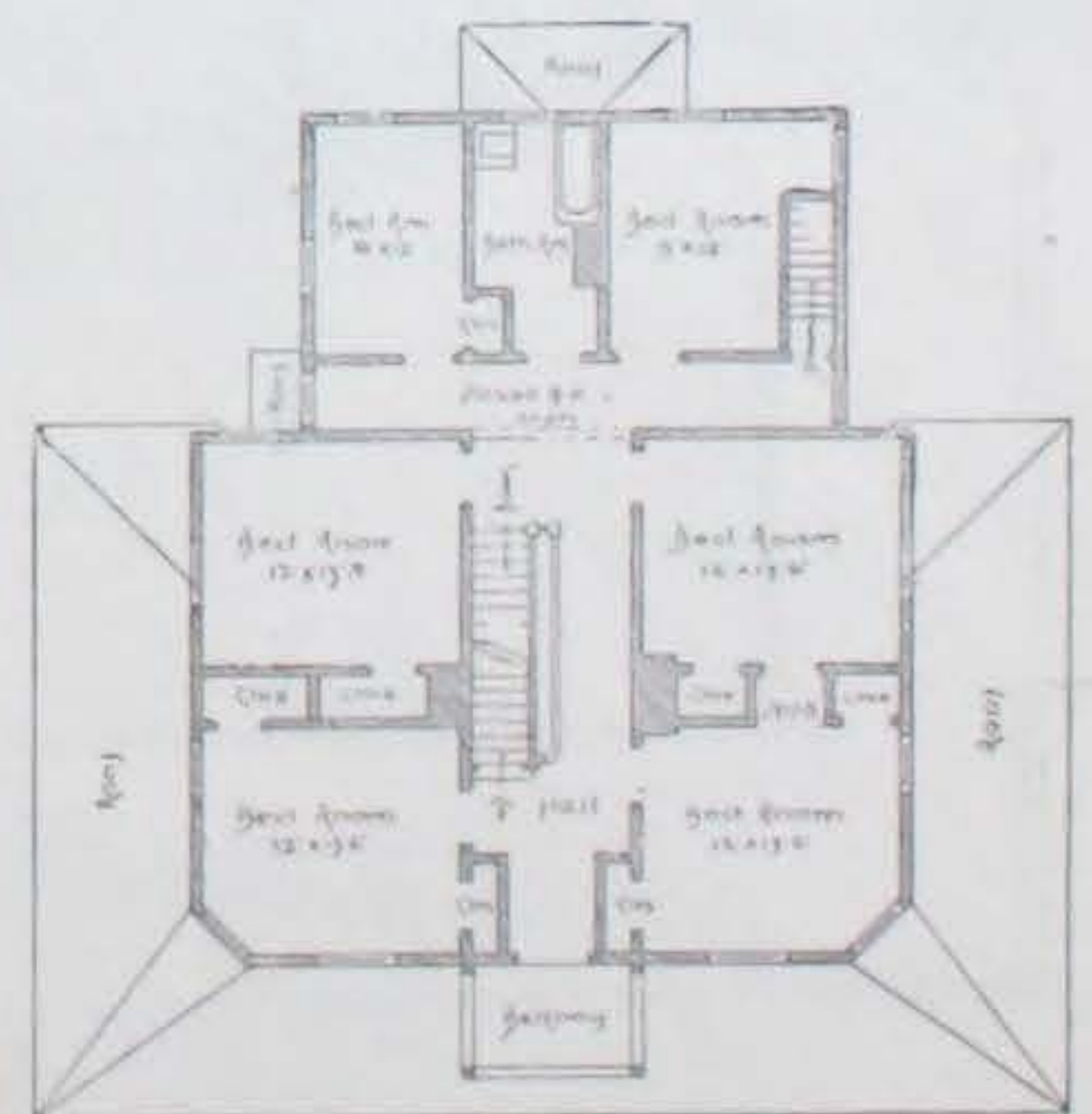
Servants' stairway from the kitchen to the rear hall of the second floor.

Cellar under the kitchen and front hall.

Furnace pipes and registers are provided. Three rooms are finished in the attic.



FIRST FLOOR. NO. 412



SECOND FLOOR. NO. 412



DESIGN No. 413. PERSPECTIVE VIEW

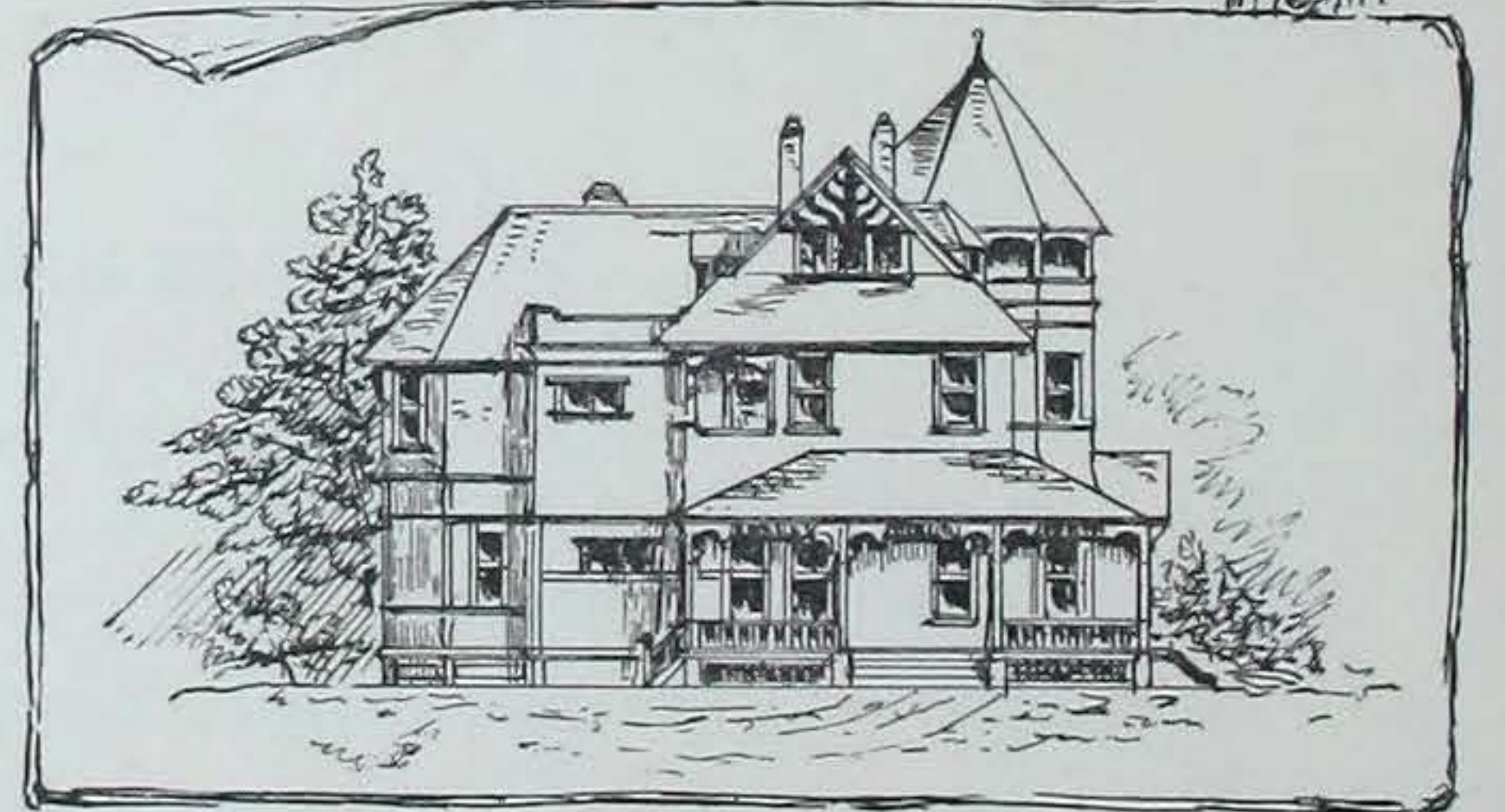
DESCRIPTION OF DESIGN NUMBER 413

SIZE OF STRUCTURE: Front, 56 ft., not including veranda.
Side, 58 ft., including front veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 13 ft.; Second Story, 12 ft.;
Attic, not finished.

MATERIALS: Foundation, brick piers; First Story, clapboards;
Second Story, shingles; Roof, shingles.



COST: \$5,700, complete, except mantels.

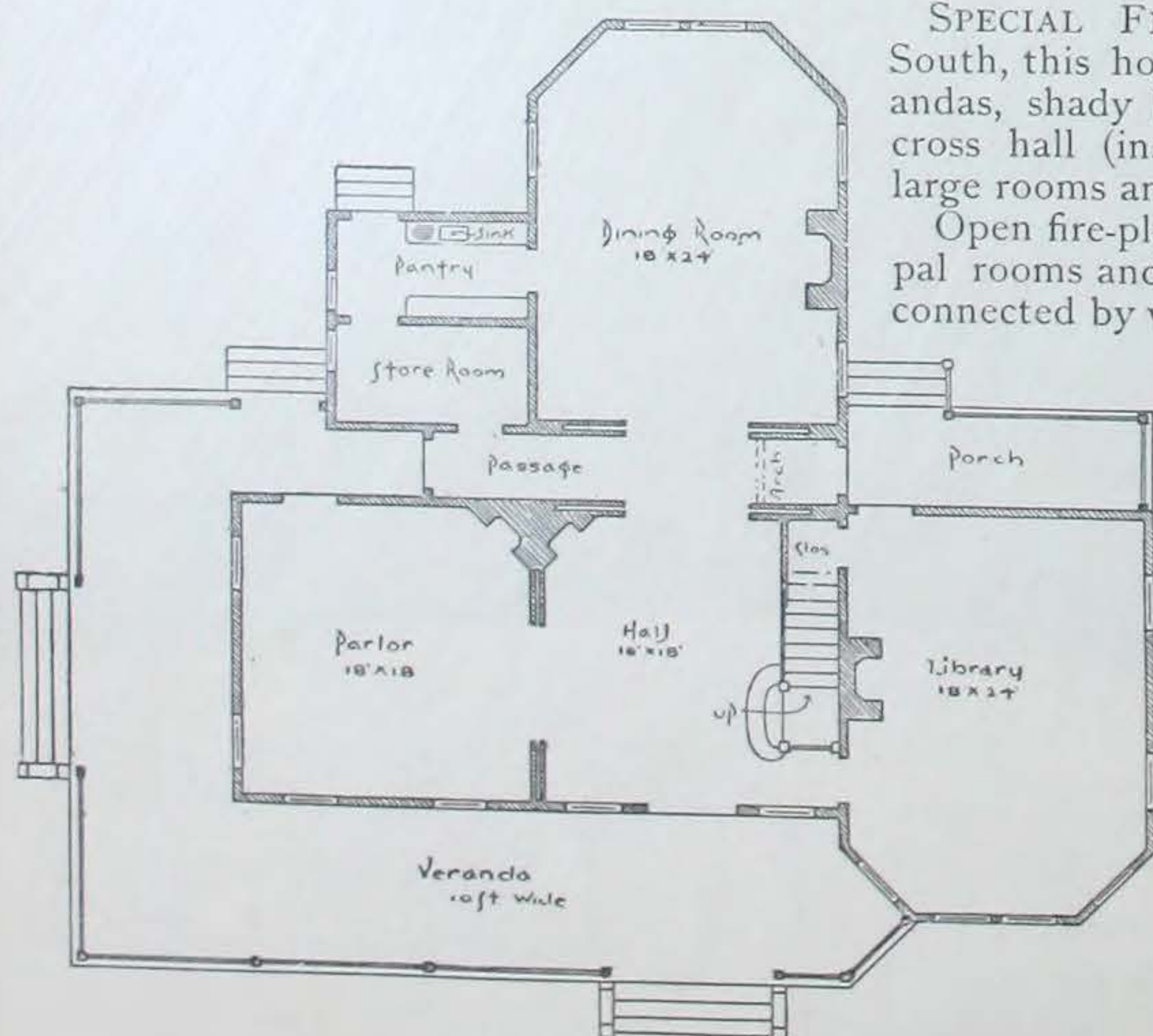
[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—Designed for the South, this house has long and wide verandas, shady balconies, a large hall and a cross hall (insuring a current of air), very large rooms and high stories.

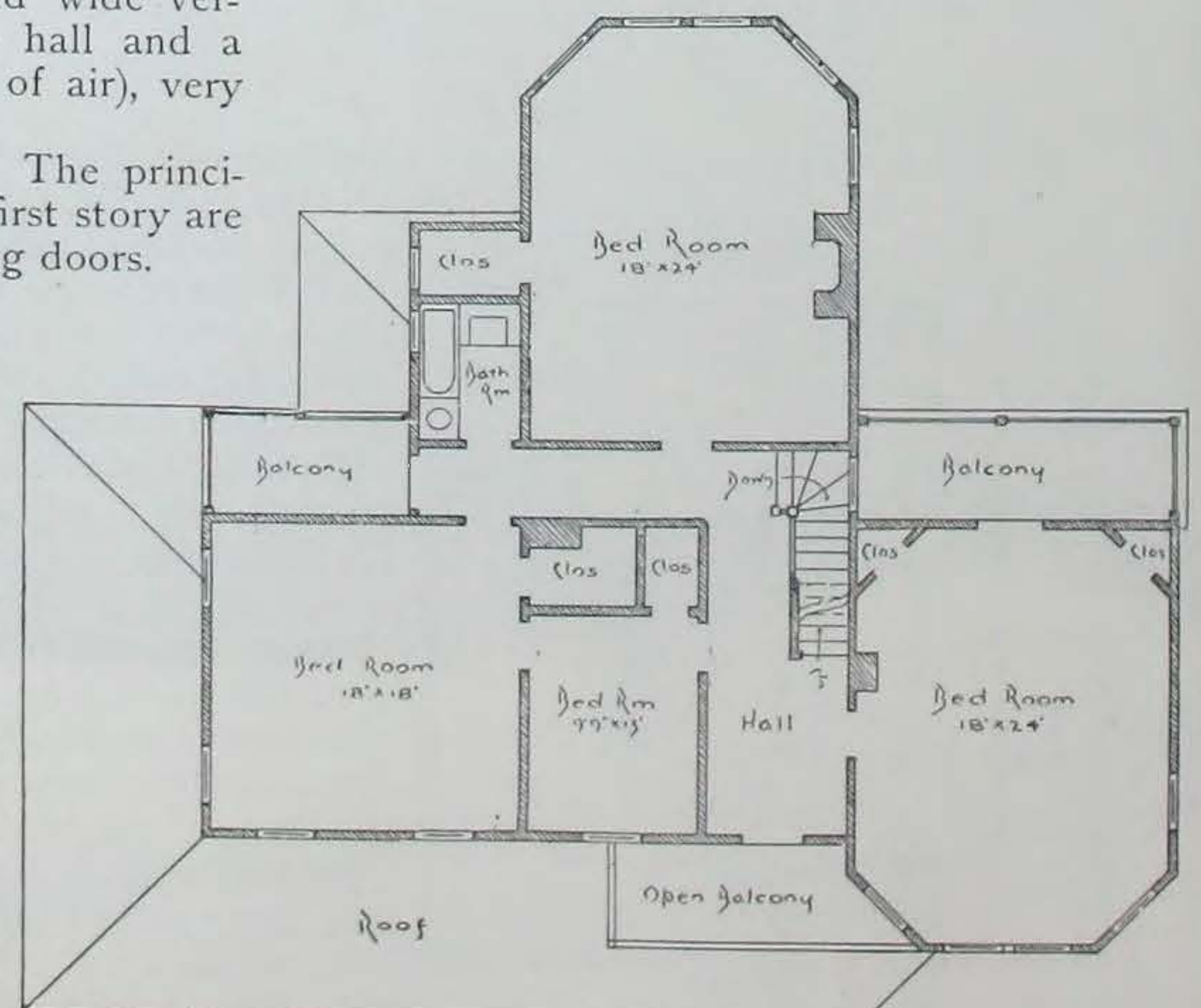
Open fire-places throughout. The principal rooms and the hall of the first story are connected by wide double sliding doors.

The attic is floored but not finished. The house is set upon a foundation of brick piers. There is no cellar.

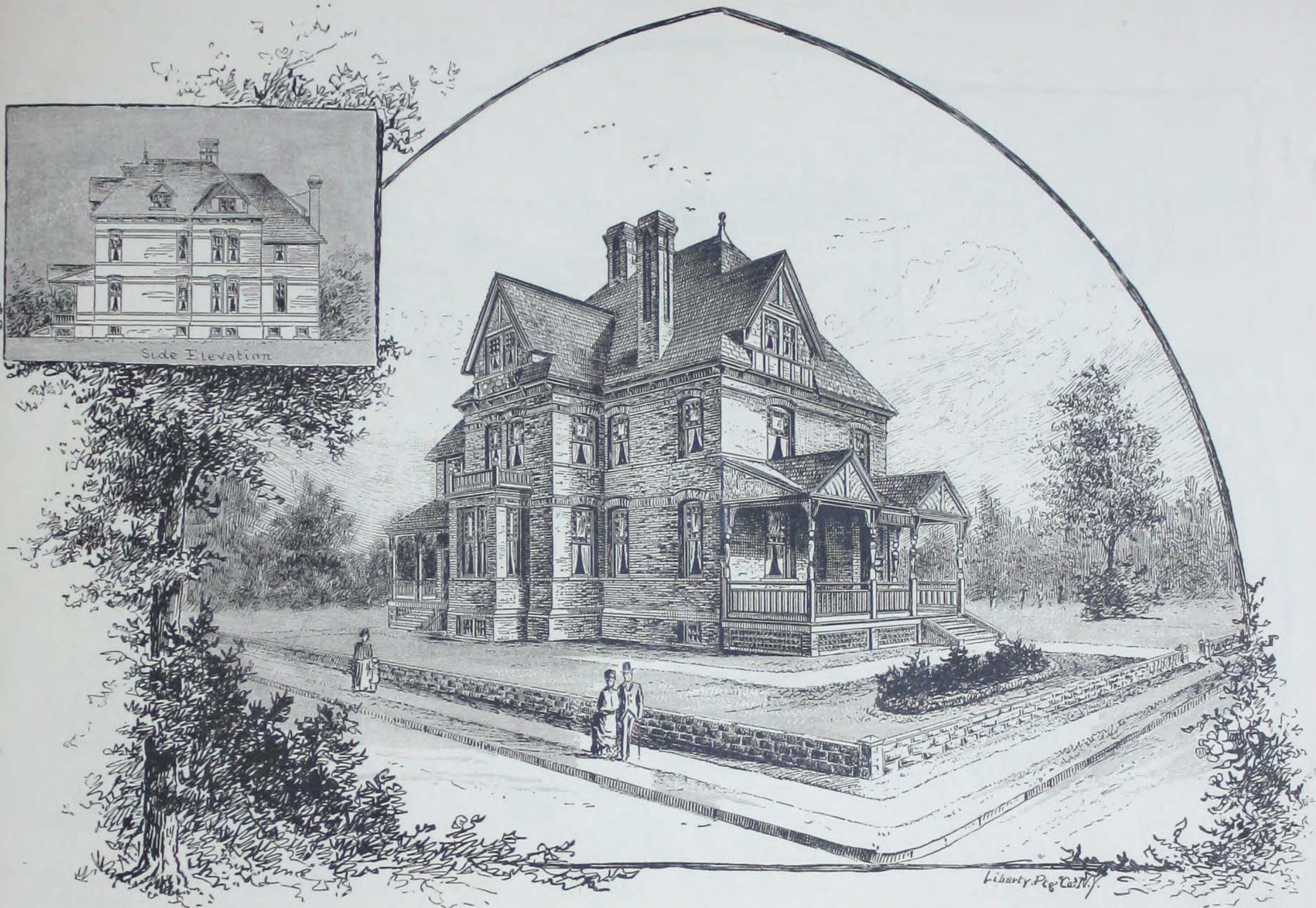
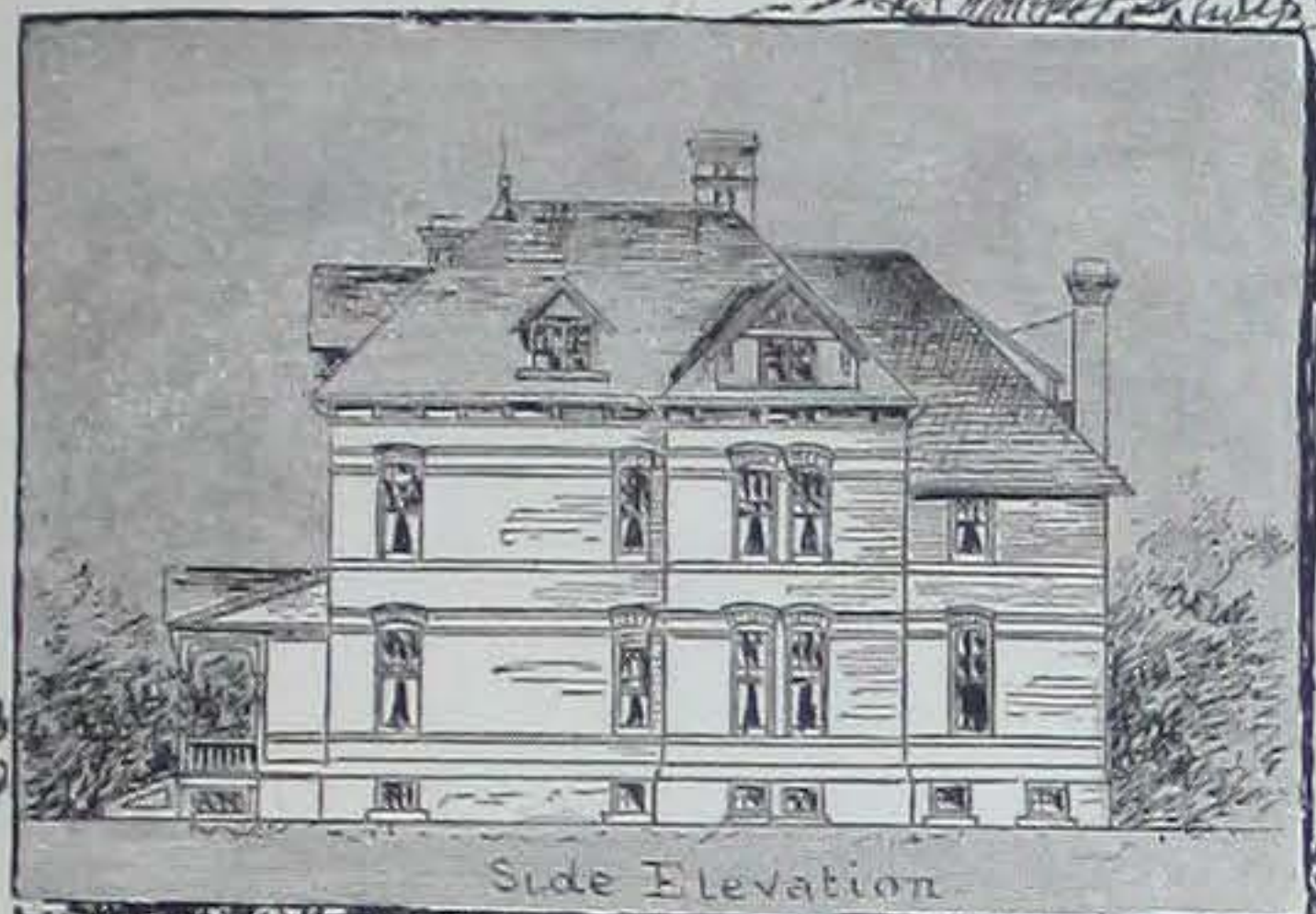
In many parts of the South this house can be built for one-quarter to one-third less than our estimate of cost.



FIRST FLOOR. NO. 413



SECOND FLOOR. NO. 413



DESIGN No. 414. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN
NUMBER 414

SIZE OF STRUCTURE: Front, 23 ft., 8 in.; extreme width, 38 ft., 6 in. Side, 59 ft., including front veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft.; Second Story, 9 ft.; Third Story, 8 ft.

MATERIALS: Foundation, stone; First Story, brick; Second Story, brick; Roof, slate.

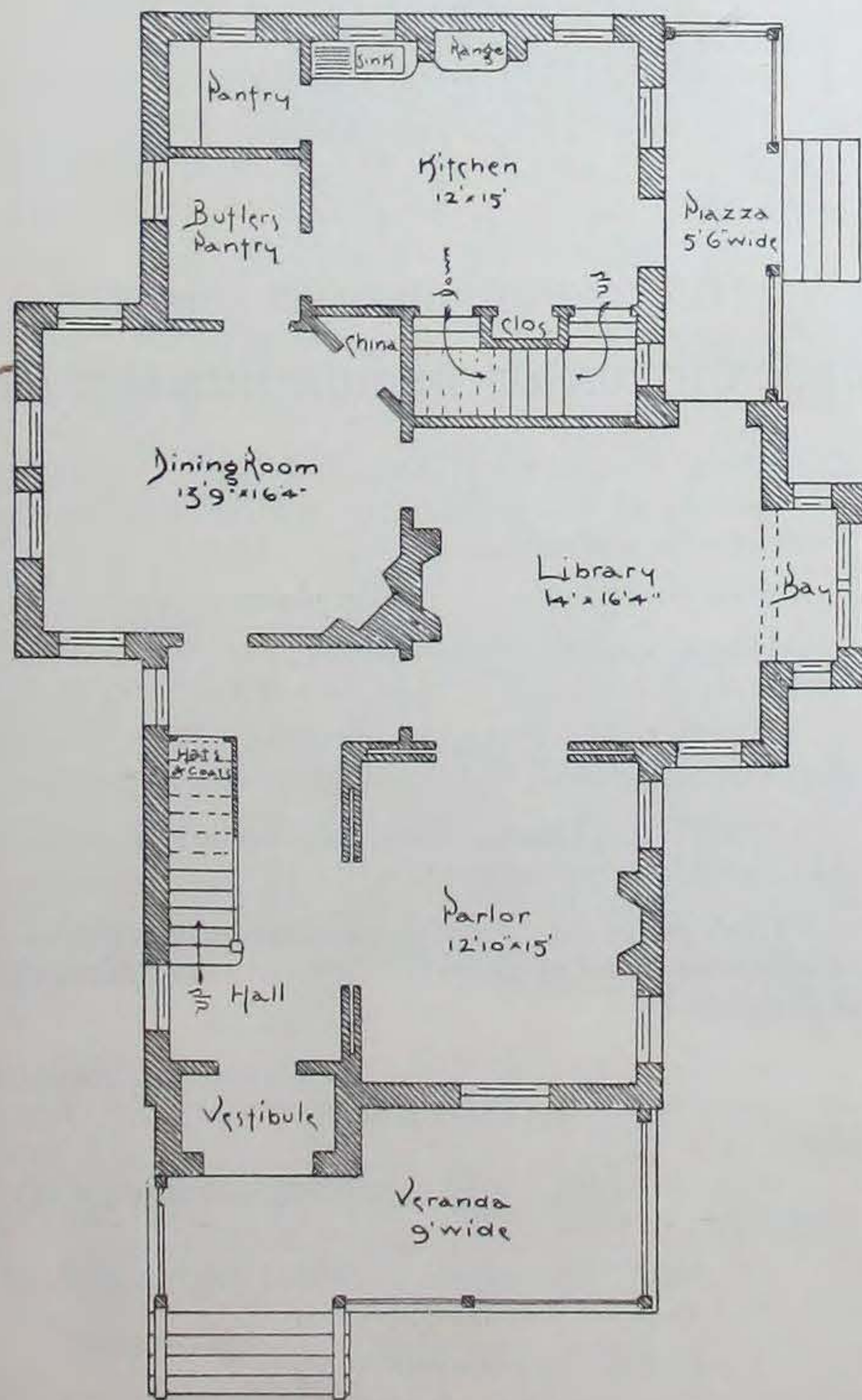
COST: \$6,000, complete, except mantels, range and furnace.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

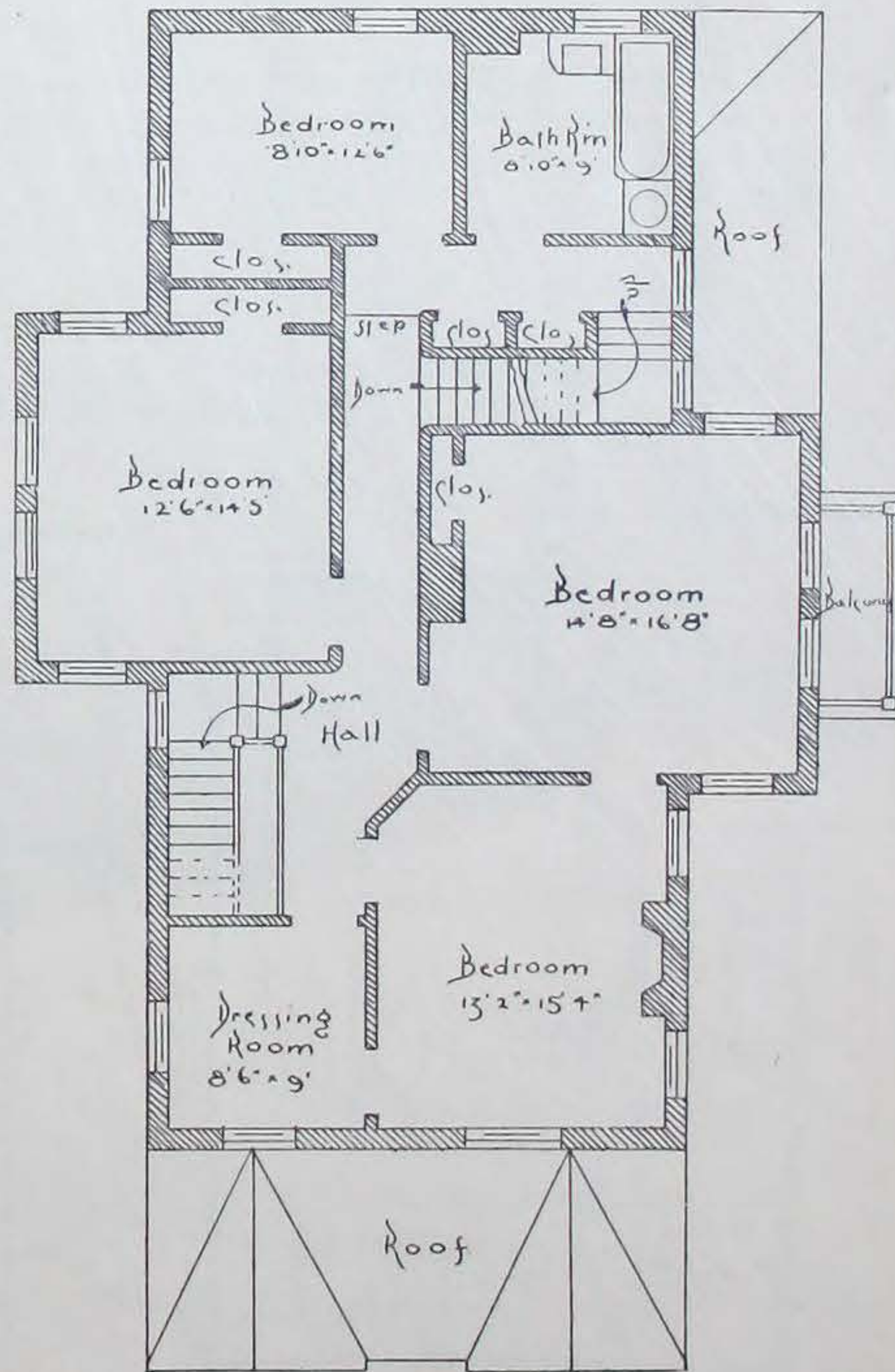
SPECIAL FEATURES.—A brick house. The walls of first story are 12 in., and those of second story, 8 in. thick. They are faced with select stock brick, the arches, belt courses, &c., of pressed brick.

Three bedrooms and a trunk room in the attic, besides closets.

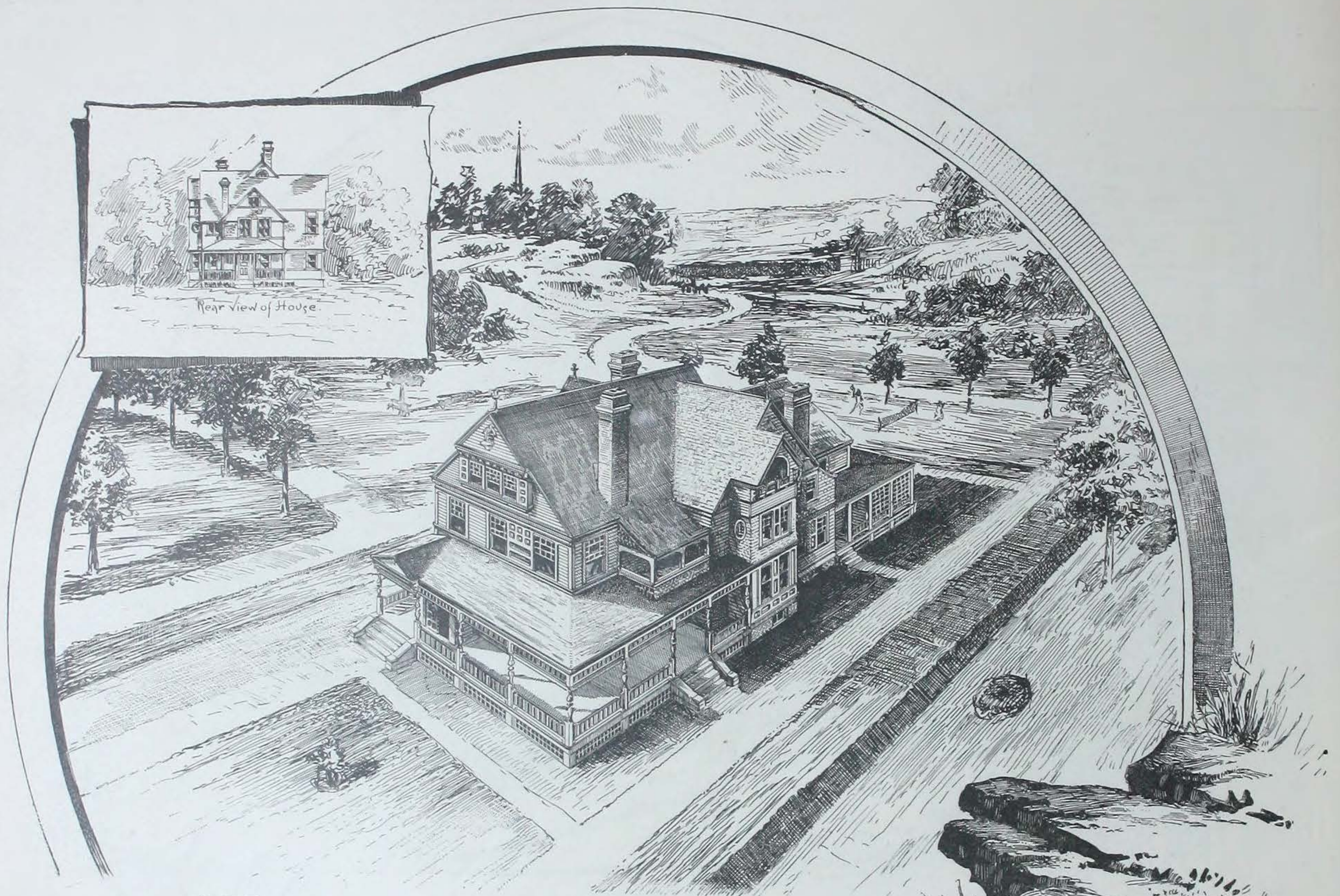
Cellar under the whole house; laundry under the kitchen. Heater pipes and registers are provided.



FIRST FLOOR. NO. 414



SECOND FLOOR. NO. 414



DESIGN No. 415. BIRD'S-EYE VIEW

DESCRIPTION OF DESIGN NUMBER 415

SIZE OF STRUCTURE: Front, 26 ft., 6 in., extreme width, 41 ft. Side, 66 ft., 6 in., not including front or rear veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft., 6 in.; First Story, 10 ft.; Second Story, 9 ft.; Attic Story, 8 ft.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Roof, shingles.

COST: \$5,800, complete, except mantels, range and heating apparatus.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

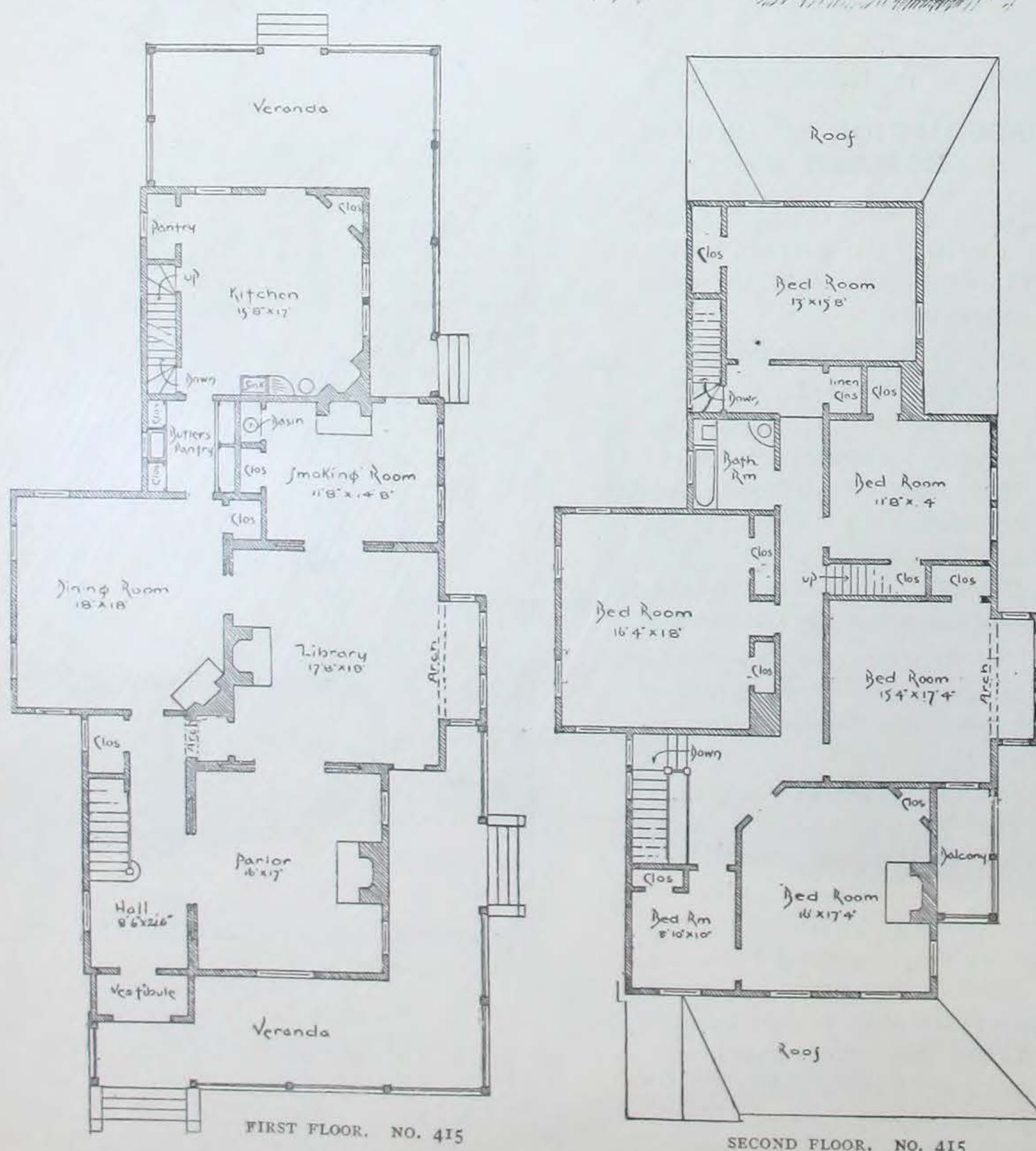
SPECIAL FEATURES.—Wide verandas. Sliding doors connect the principal rooms of the first story.

Open fire-places. The smoking-room has a set wash-basin in the closet.

The butler's pantry is provided with a copper sink and cupboards and drawers.

Cellar under the whole house.

Three bedrooms in the attic, besides a storage room.



FIRST FLOOR. NO. 415

SECOND FLOOR. NO. 415



DESIGN No. 416. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 416

SIZE OF STRUCTURE: Front, 46 ft.; extreme width, 74 ft. Side, 61 ft., including front veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 10 ft., 6 in.; Second Story, 9 ft., 6 in.; Attic Story, 8 ft., 6 in.

MATERIALS: Foundation, stone; First Story, front portion, stone; rear extension, clapboards; Second Story, front portion, stone; rear extension, shingles; Gables, shingles; Roof, shingles.

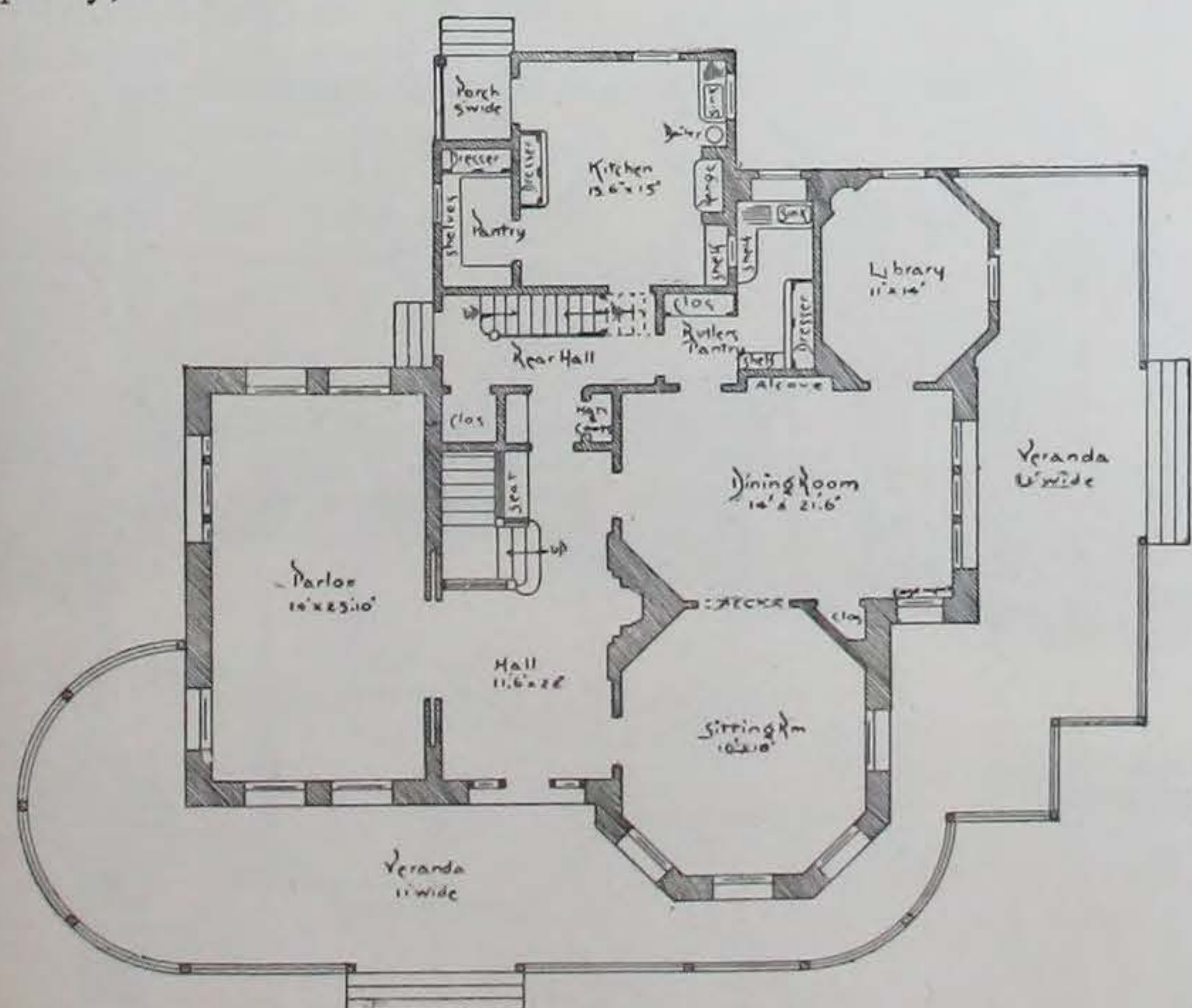
COST: Complete, except mantels, range and heating apparatus, \$6,000 to \$7,000, according to locality, proximity to stone quarry, &c.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

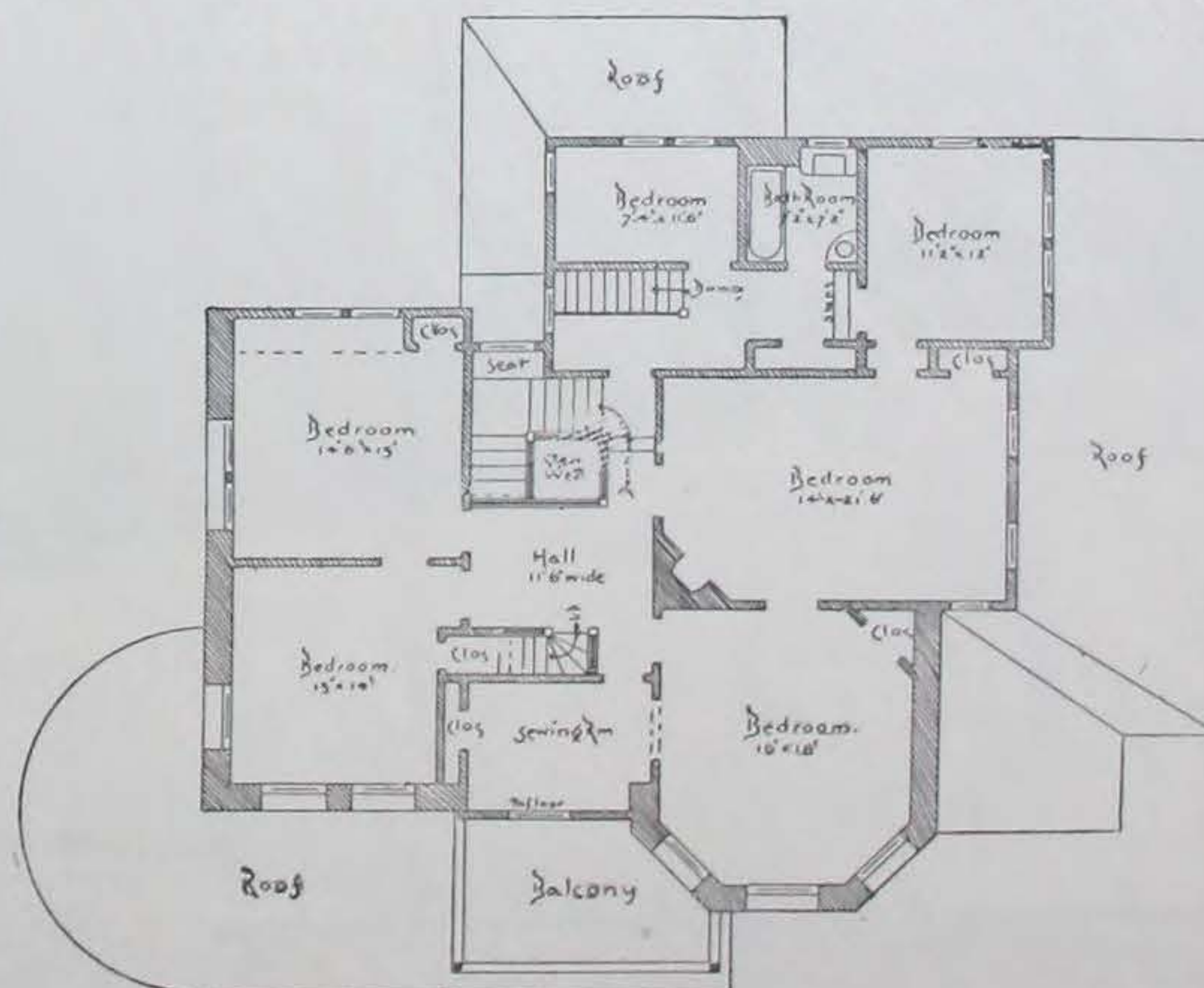
SPECIAL FEATURES.—The main or front part of house is built of quarry faced stone, up to the attic floor beams. The arches and jambs of windows and doors are pressed brick. If the stone used is light colored, Milwaukee or buff brick to be used; if dark colored, red brick to be used.

In-summer, an awning can be stretched over the front balcony, for which purpose two ornamental iron standards are provided.

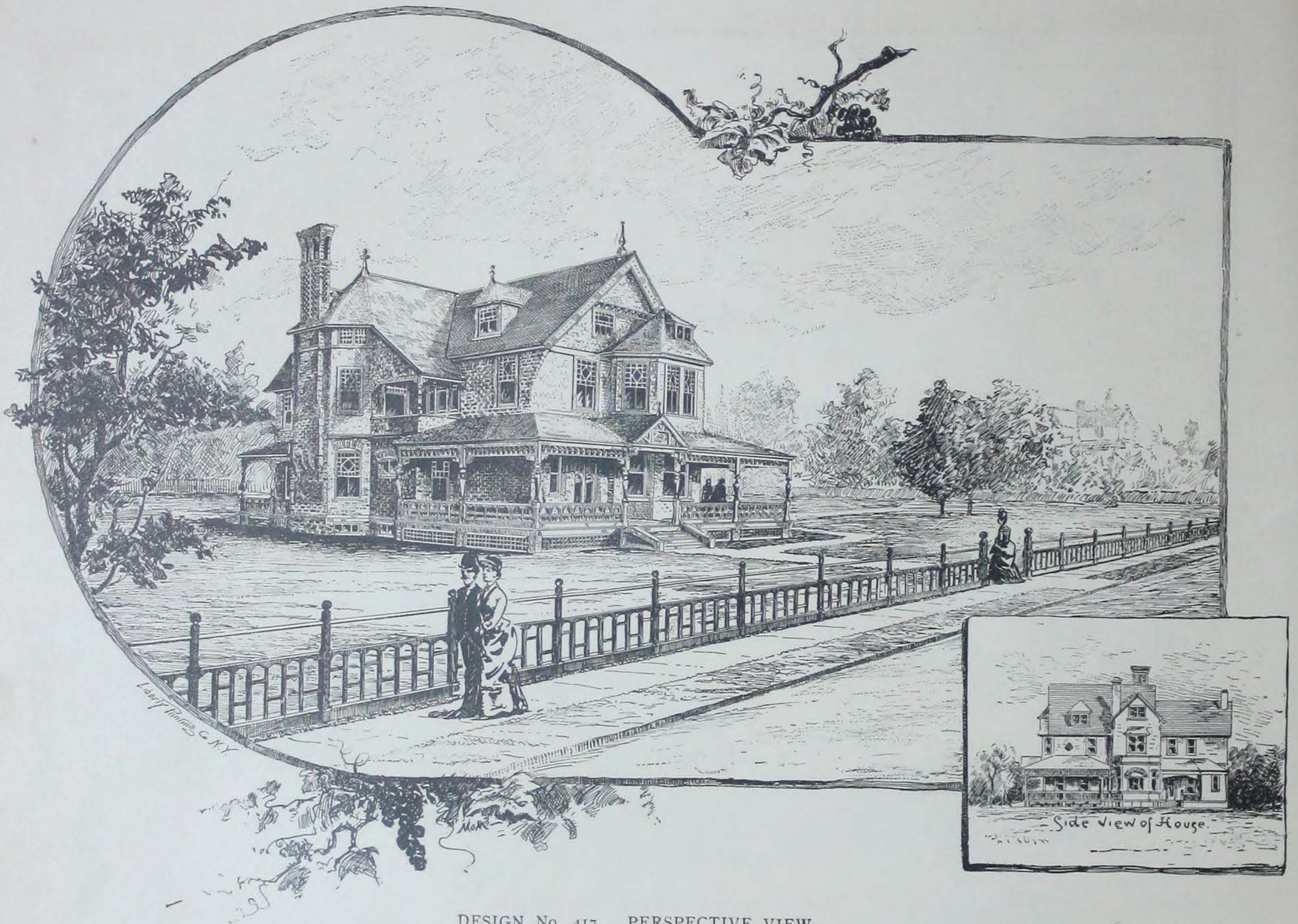
Three bedrooms and a store-room in the attic, also a large balcony. Cellar under the whole house.



FIRST FLOOR. NO. 416



SECOND FLOOR. NO. 416



DESIGN No. 417. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 417

SIZE OF STRUCTURE: Front, 27 ft., 8 in., including verandas, 44 ft. Side, 62 ft., including front veranda.
SIZE OF ROOMS: See floor plans.
HEIGHT OF STORIES: Cellar, 7 ft., 6 in.; First Story, 10 ft., 6 in.; Second Story, 10 ft.; Attic Story, 8 ft., 6 in.

MATERIALS: Foundation, stone; First Story, brick; Second Story, shingles; Gables, shingles; Roof, slate.

COST: \$6,500, complete, except mantels and heating apparatus.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

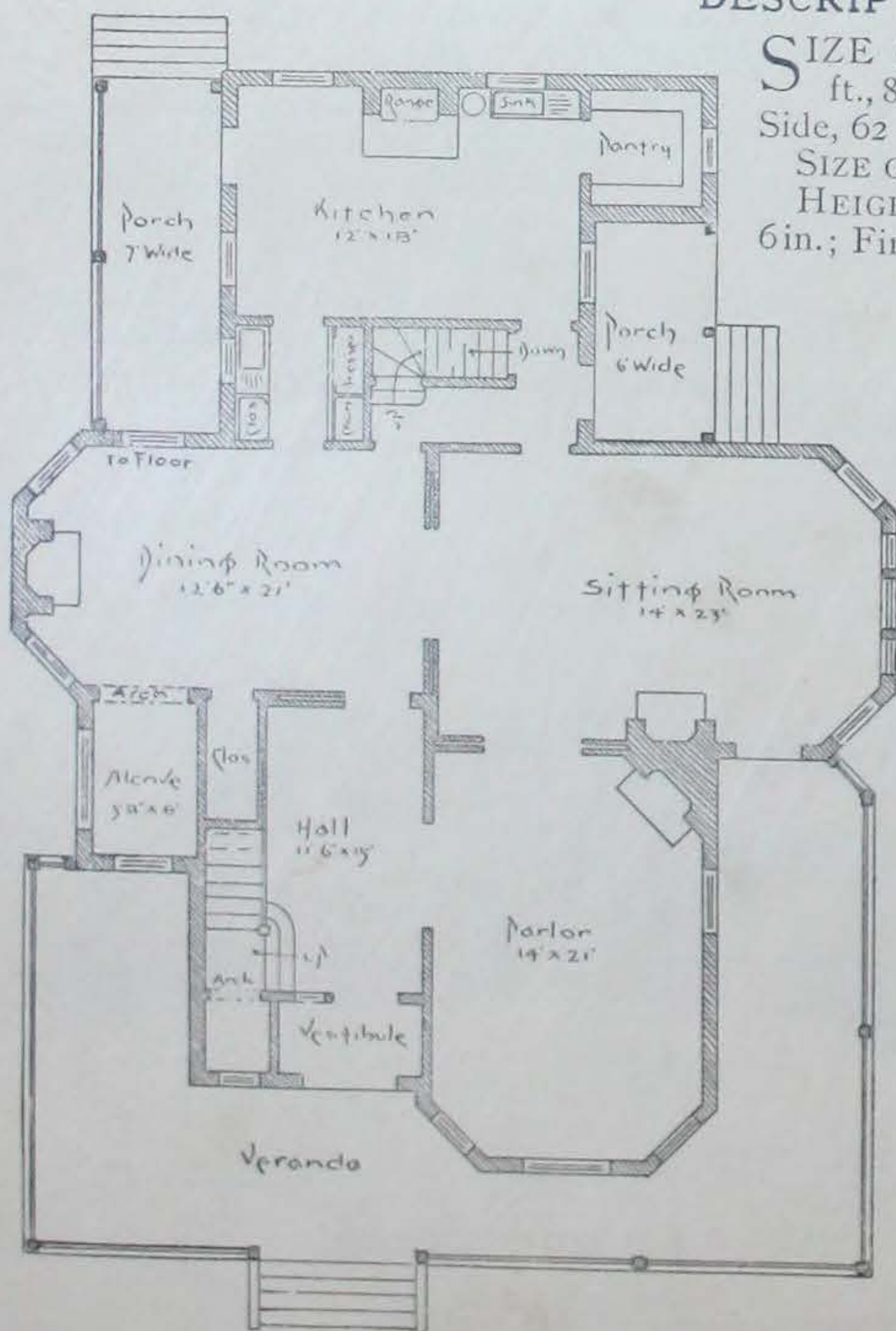
SPECIAL FEATURES.—Large rooms, all connecting. Open fire-places.

The verandas are 9 and 8 ft. wide, respectively.

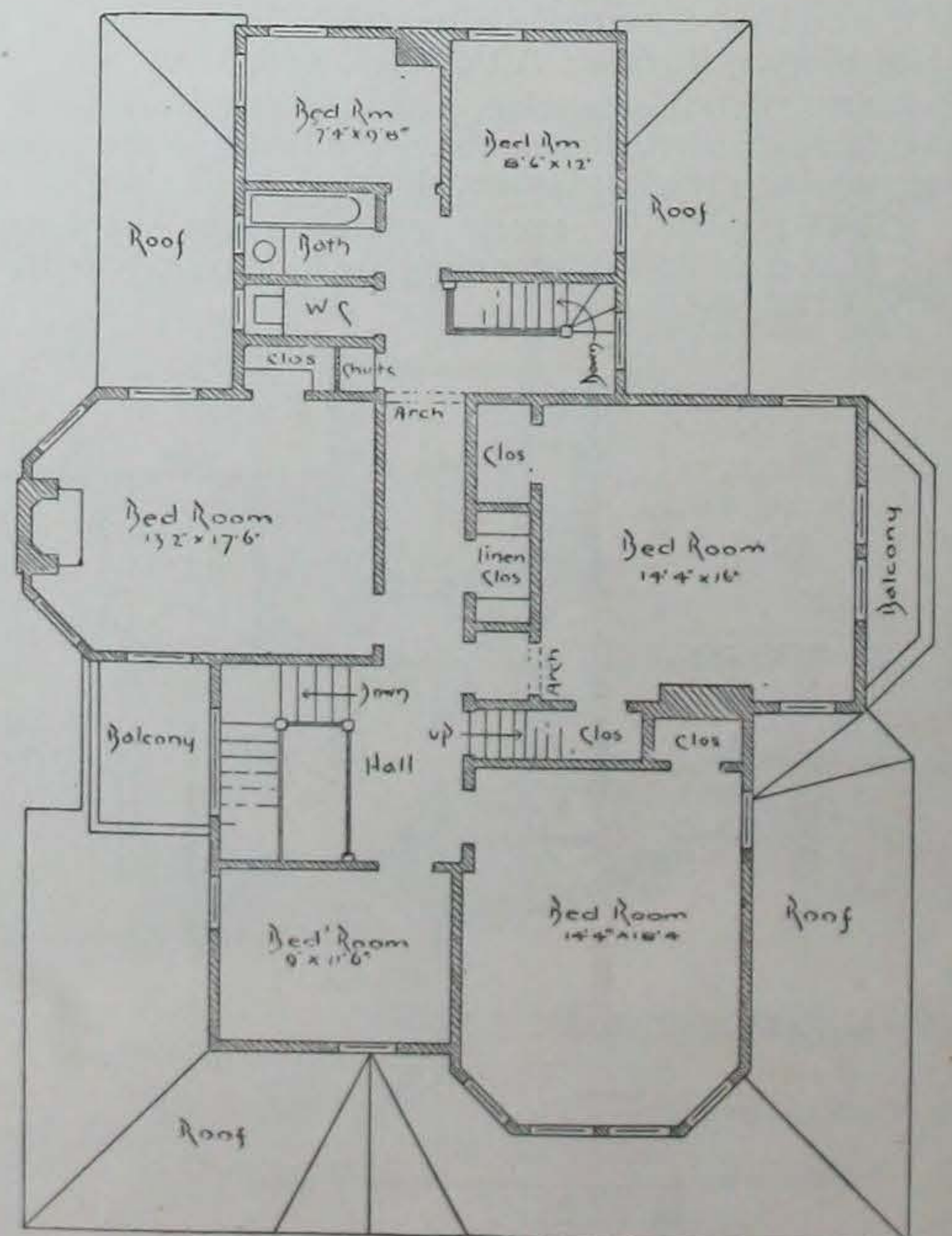
Large hall, with handsome staircases.

The floor of the entire first story is laid double with hard wood, finished for rugs.

Three rooms in the attic. Cellar under the whole house, laundry under the kitchen.



FIRST FLOOR. NO. 417



SECOND FLOOR. NO. 417



DESIGN No. 418. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 418

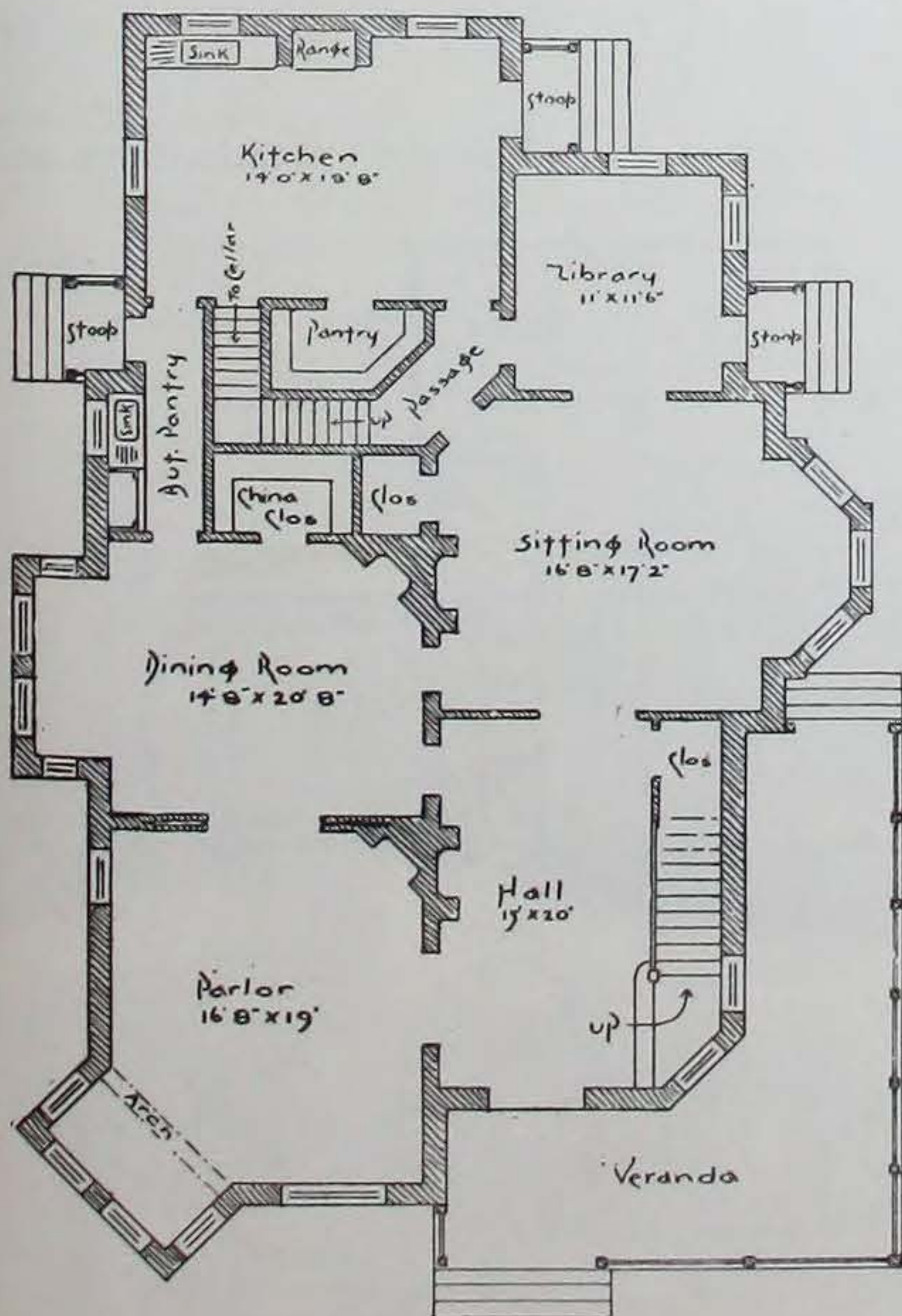
SIZE OF STRUCTURE: Front 35 ft.; extreme width, 47 ft., 6 in. Side, 68 ft., over all.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft.; First Story, 12 ft.; Second Story, 10 ft.

dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

This design can be reversed, enlarged, reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.



FIRST FLOOR. NO. 418

MATERIALS:
Foundation, stone;
First Story, brick;
Second Story, brick; Gables, half timber and cement;
Roof, slate.

COST: \$9,000, complete, except mantels and heating apparatus.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and at different

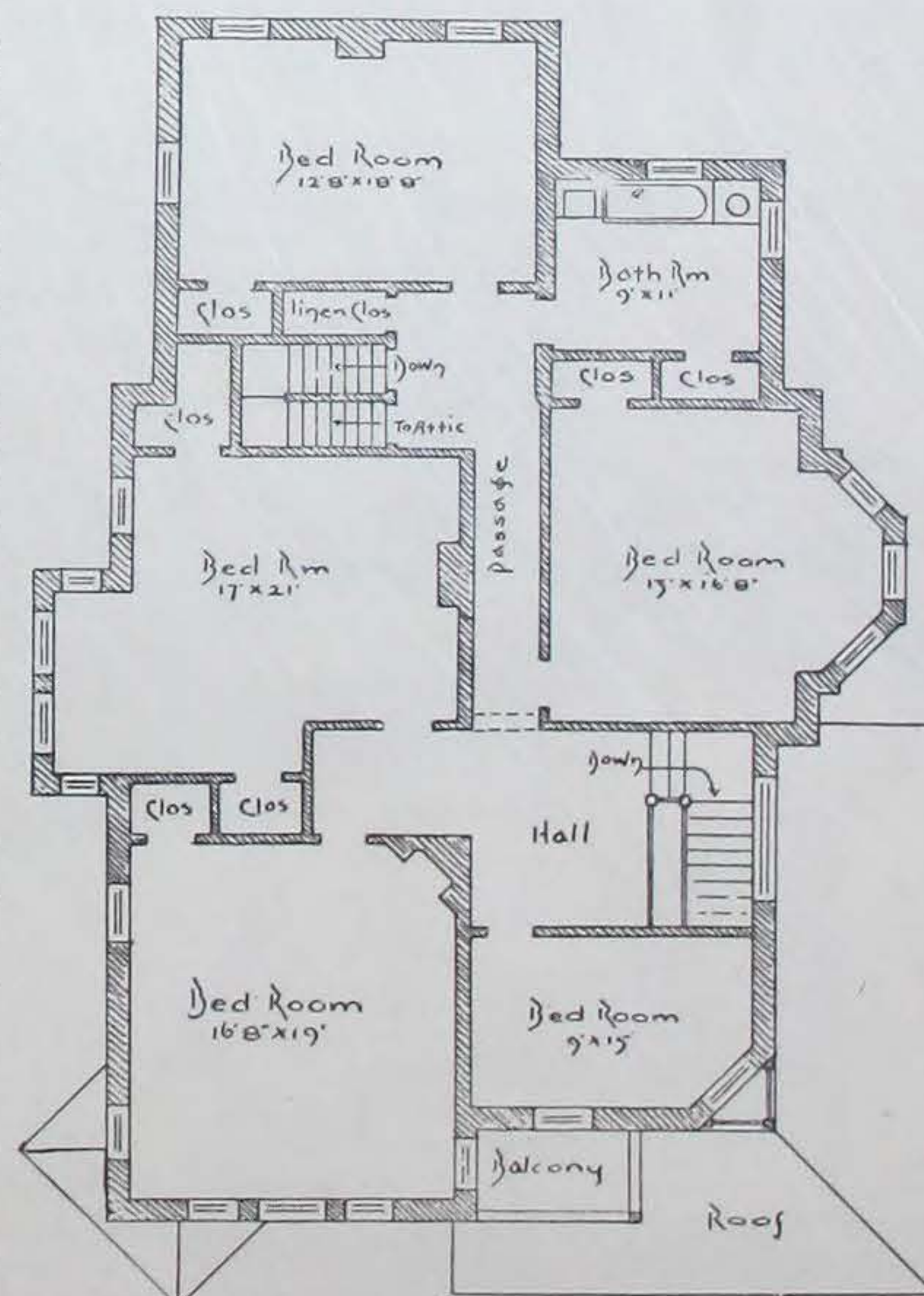
SPECIAL FEATURES.—A brick house. The walls are faced on the outside with select stock brick; for the trimmings such as belt courses, arches, etc., red pressed brick are used. The whole oiled at completion.

Wide verandas. A large hall with fire-place and an oak staircase.

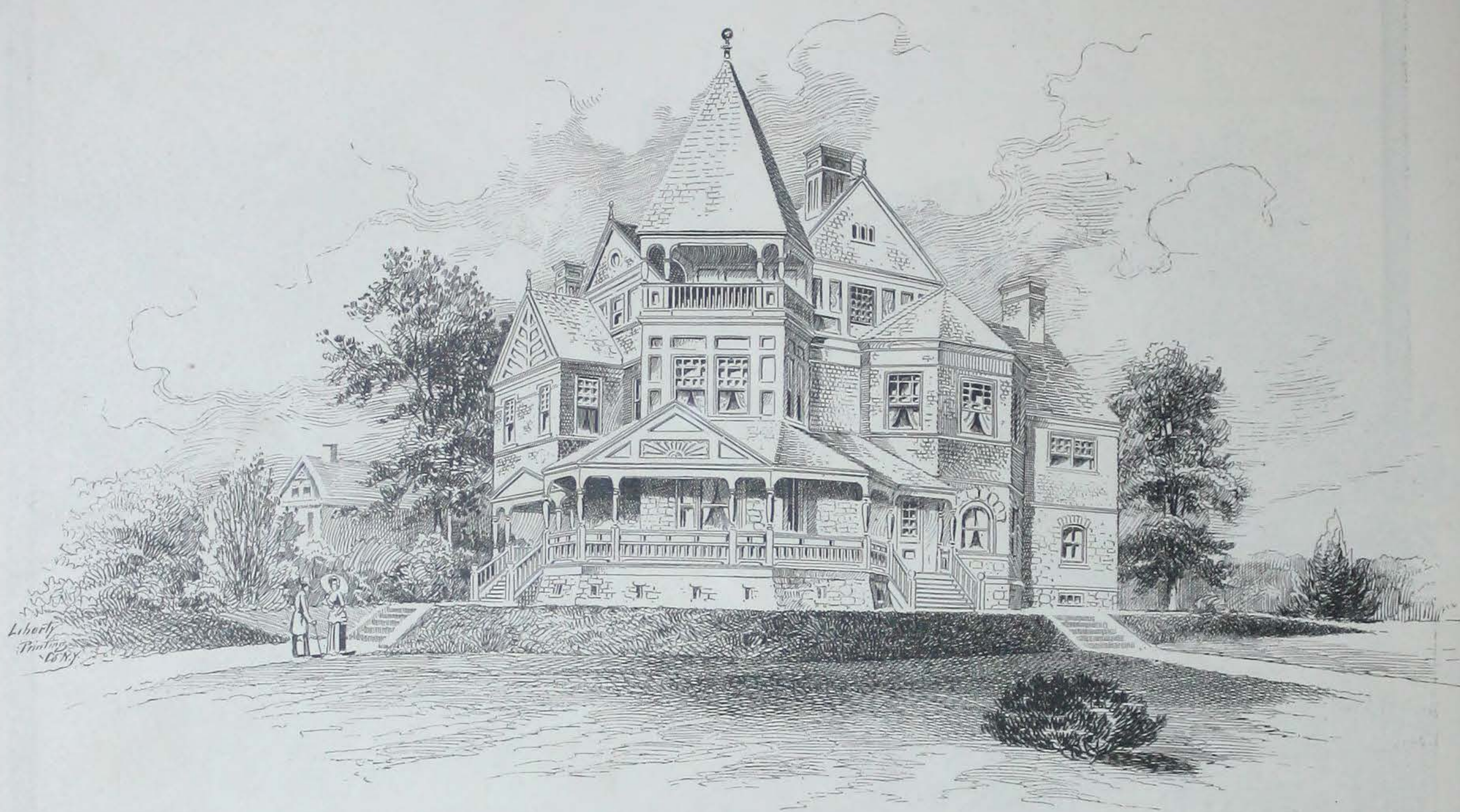
A good house for the South, as the rooms are large and the ceilings are high.

Three good bedrooms in the attic.

Cellar under one-half of the house.



SECOND FLOOR. NO. 418



DESIGN No. 419. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 419

SIZE OF STRUCTURE: Front, 54 ft., including veranda. Side, 74 ft., including the projection of front veranda.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 8 ft.; First Story, 10 ft.; Second Story, 9 ft., 6 in.; Third Story, 9 ft.

MATERIALS: Foundation, stone; First Story, stone; Second Story, shingles; Roof, slate.

COST: \$8,500, complete, except mantels and heating apparatus.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

SPECIAL FEATURES.—The irregularity of the plan and the broken roof lines give a very picturesque appearance.

The first story walls are quarry-faced stone, the superstructure is frame shingled.

The large platform of the staircase has a fire-place and a seat.

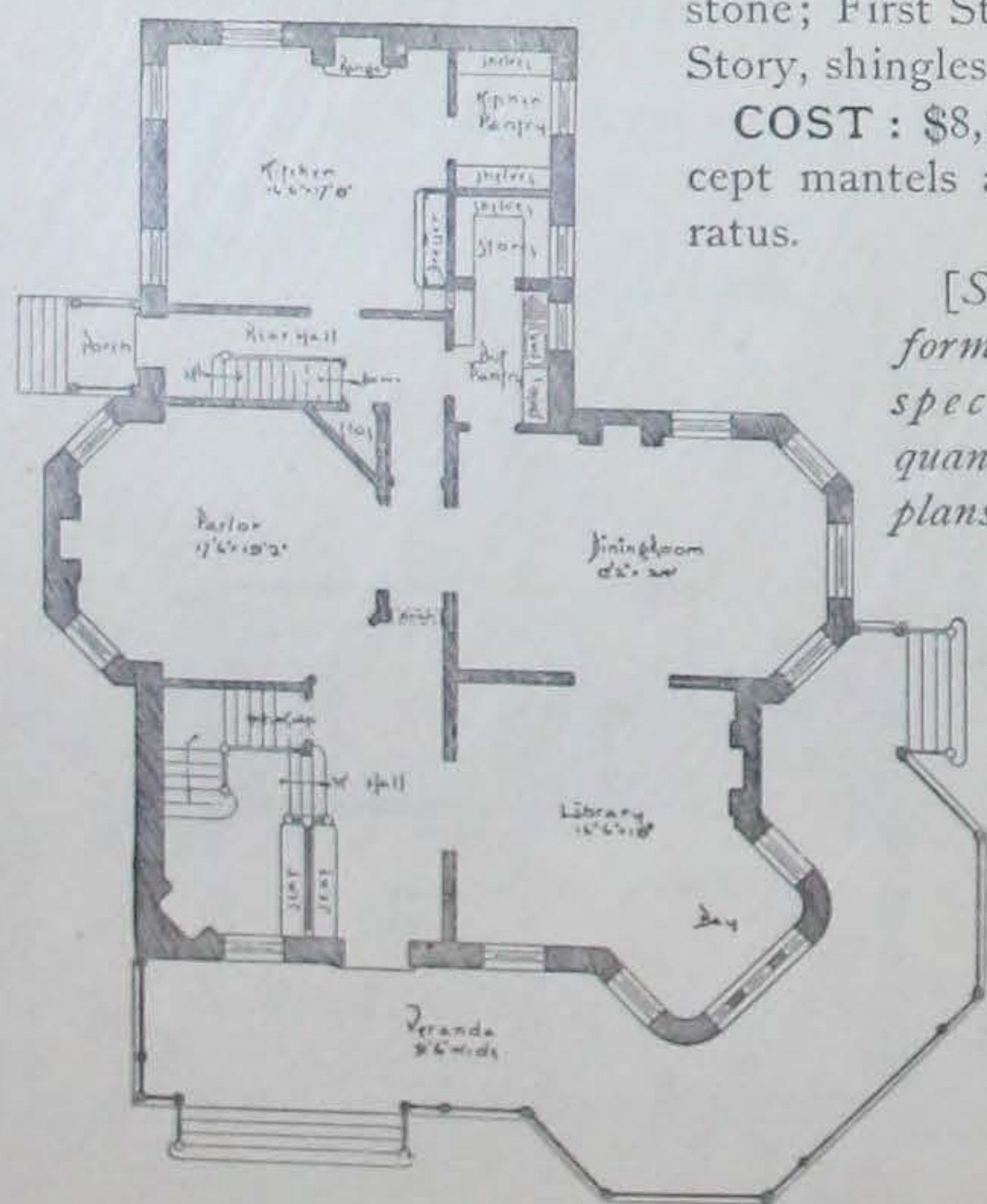
Sliding doors connect all the principal rooms of the first floor.

Open fire-places both down stairs and up stairs; stationary wash-basins in the dressing-rooms.

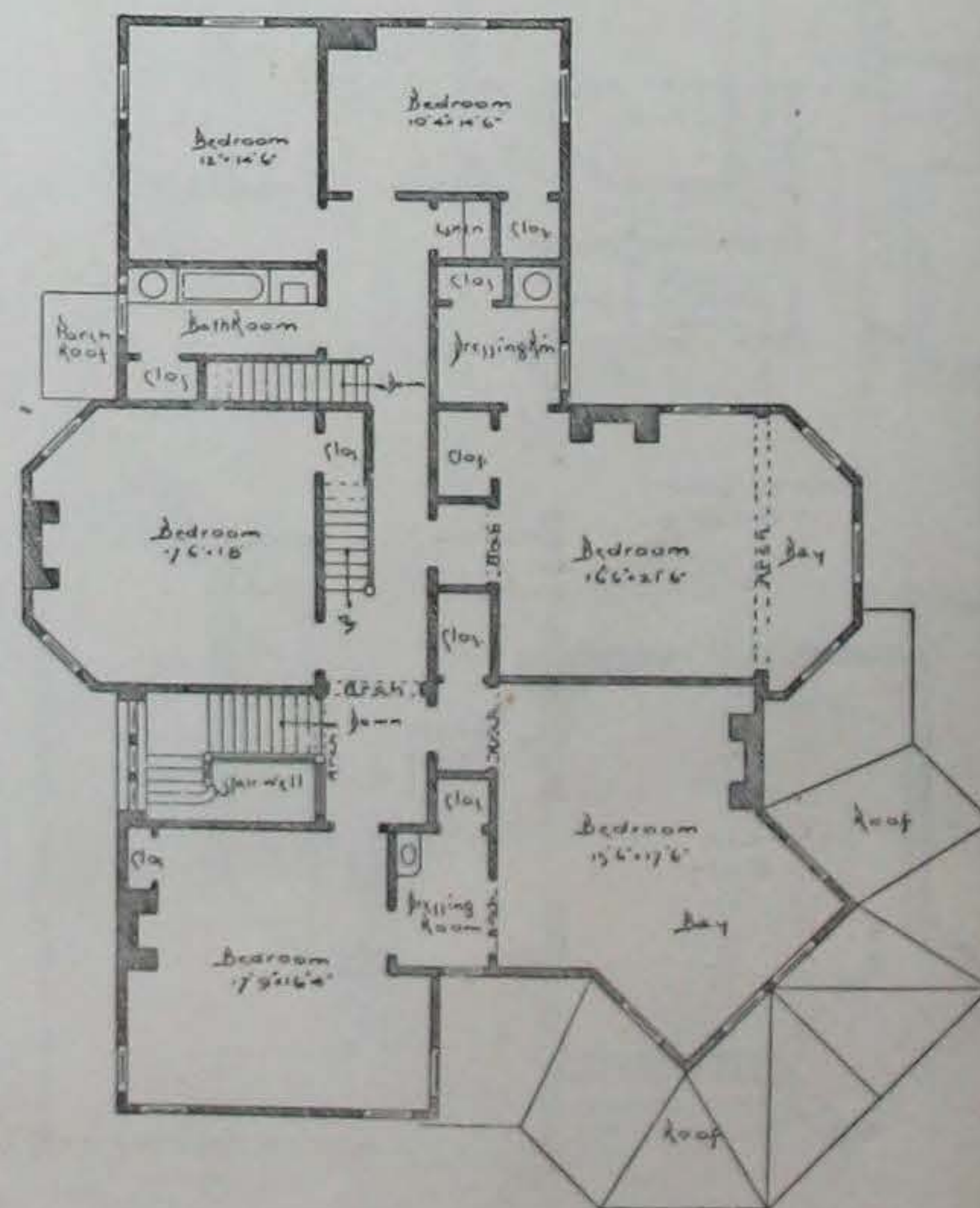
Cellar under the whole house; laundry with stationary tubs under the kitchen. Servants' water-closet, well ventilated, in the cellar.

Ash-pits in the cellar for each fire-place, with a flue leading to the same from the fire-places so that no ashes need be carried through the house.

Five bedrooms are finished in the attic.



FIRST FLOOR. NO. 419



SECOND FLOOR. NO. 419



DESIGN No. 420. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NO. 420

SIZE OF STRUCTURE: Front, 48 ft. Extreme width, including carriage porch and veranda, 77 ft. Side, 80 ft., over all.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: Cellar, 7 ft., 6 in., First Story, 10 ft. Second Story, 9 ft., 6 in.; Third Story, 8 ft.

MATERIALS: Foundation, stone; First Story, stone; Second Story, shingles; Roof, slate.

COST: \$15,000, complete, including hard-wood trim throughout first and second stories, mantels and heating apparatus. The cost can be reduced to about \$12,000 by using a less elaborate interior finish.

[See page 219 for information about details, specifications, bill of quantities, and working plans of this design.]

SPECIAL FEATURES: The first story is built of quarry-faced stone; the second story is shingled with cypress or pine shingles.

A very large reception hall, with oak staircase, 5 ft. wide, and cushioned seats below.

A large open fire-place in the hall for burning wood, built of pressed brick and terra cotta, with hardwood shelf and oak over-mantel.

The ceiling of the hall is all of Georgia pine, panelled; front entrance and door of oak.

All of the fire-places are built of pressed brick and terra cotta.

Sliding doors throughout the principal rooms of first story. Lavatory and water-closet in the rear hall, first story. Servants' bath and water-closet in the attic; a water-closet in the basement also.

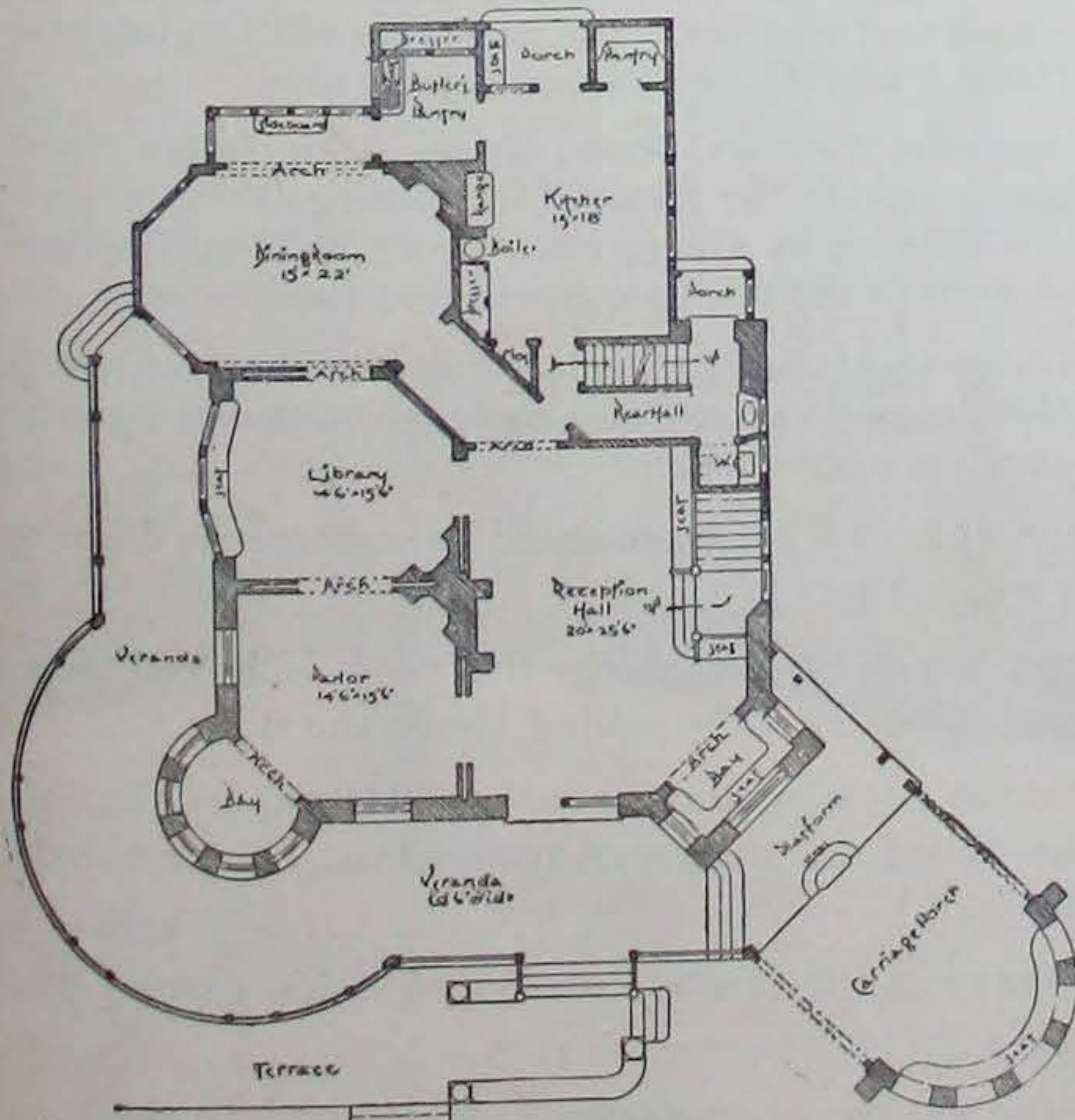
Two spare bedrooms and two servants' bedrooms in the attic. Cellar under the whole house.

NOTES

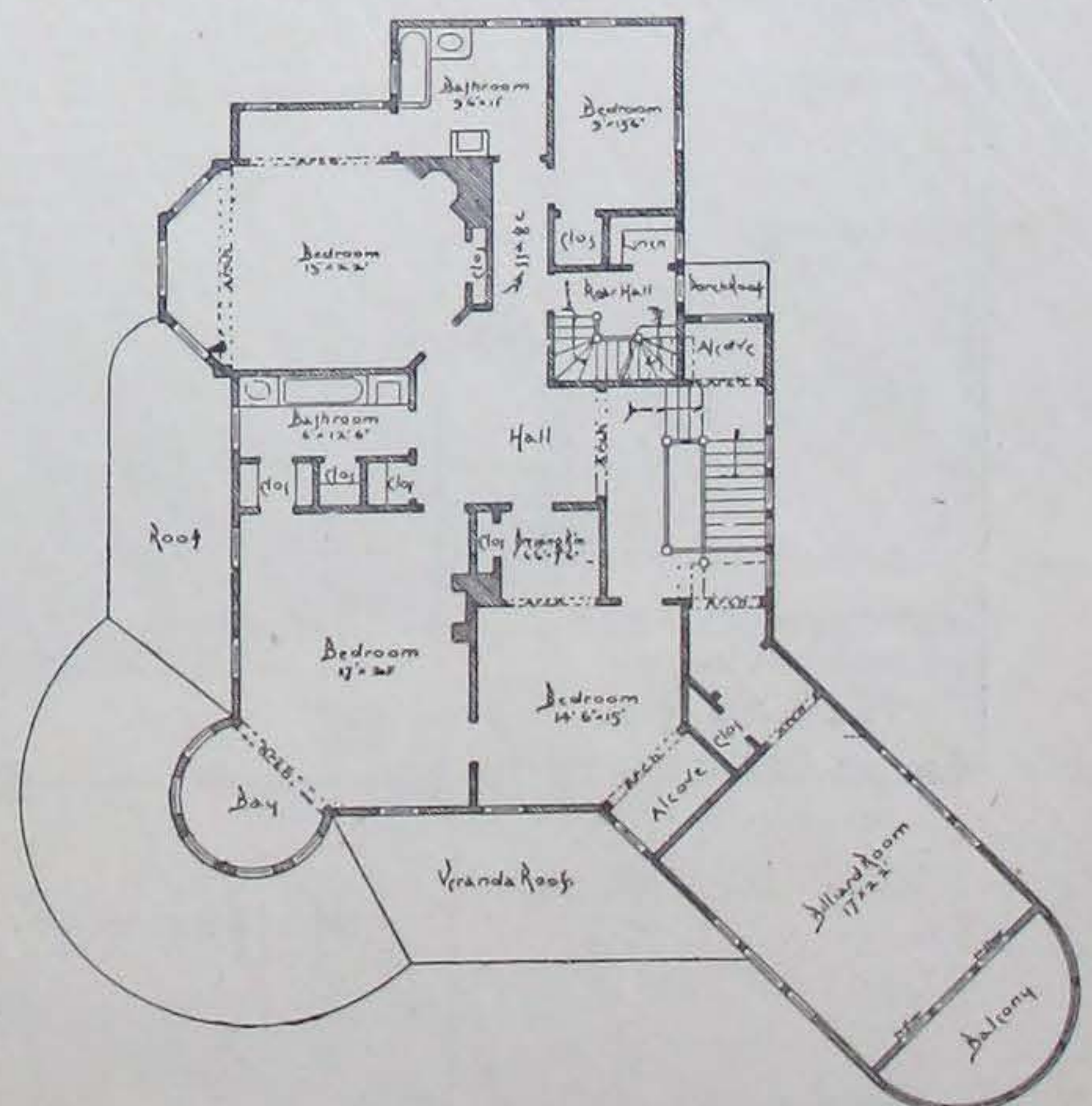
The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase, Inside Finish, Colors, etc., etc. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

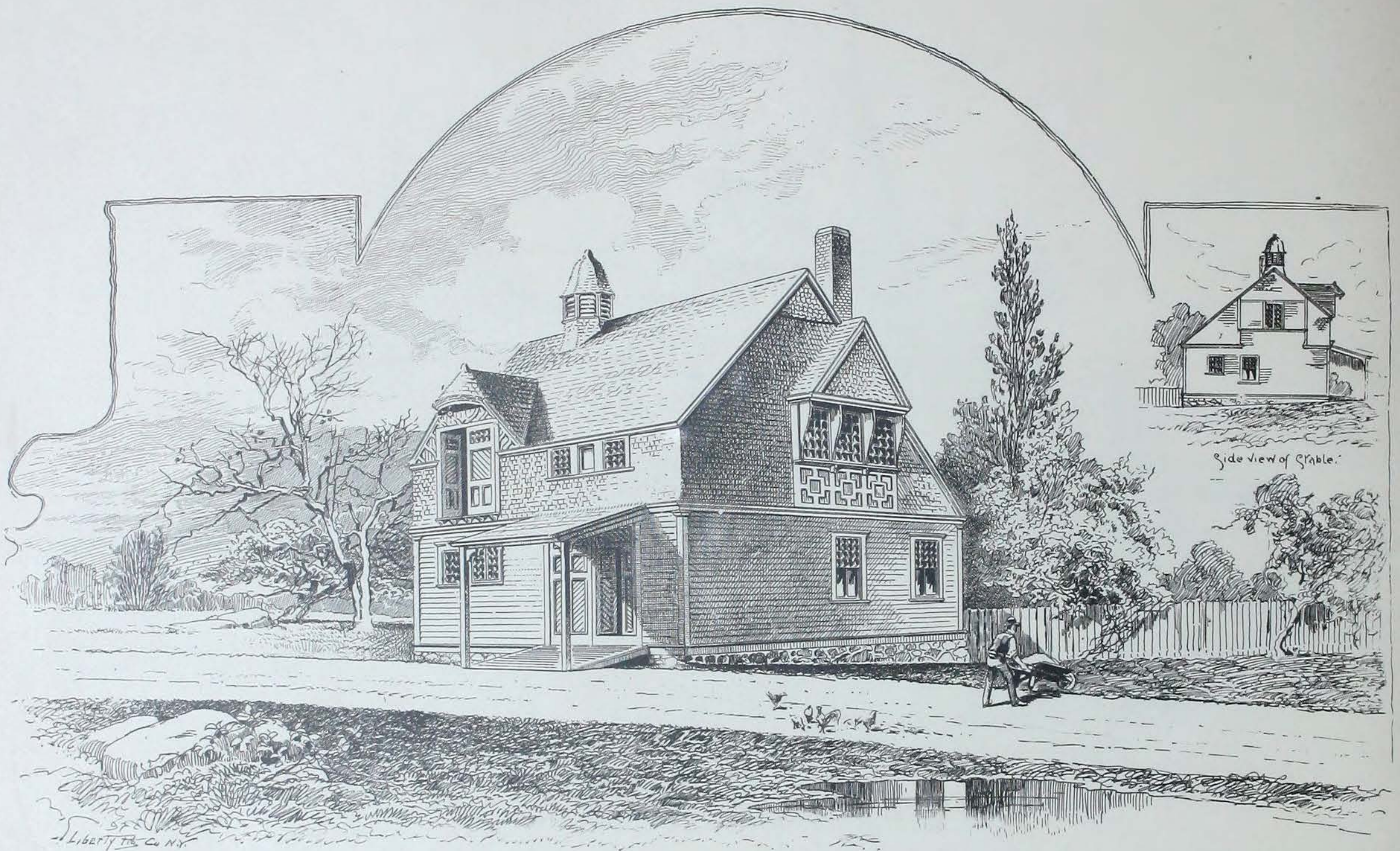
This design can be reversed, enlarged reduced or altered to suit special wants. The specifications can be altered, also, to employ different materials that may be best or cheapest in any locality.



FIRST FLOOR. NO. 420



SECOND FLOOR. NO. 420



CARRIAGE HOUSE AND STABLE, DESIGN No. 421. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 421

SIZE OF STRUCTURE: Front, 28 ft. Side, 30 ft.

SIZE OF ROOMS: See floor plan.

HEIGHT OF STORIES: First Story, 10 ft.; Loft, 6 ft. on wall at front; 14 ft., 6 in., at highest point.

MATERIALS: Foundation, stone; First Story, clapboards; Second Story, shingles; Gables, shingles; Roof, shingles.

COST: \$850, complete, except ironwork of stalls, and drains.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

The cost is figured from prices of material and labor in the neighborhood of New York City, September, 1886. In other localities and at different dates the cost will be somewhat modified. The publishers will be glad to acquaint the intending builder with this modified cost at any time.

Details of the Cornices, Windows, Doors, Gables, Trim, Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

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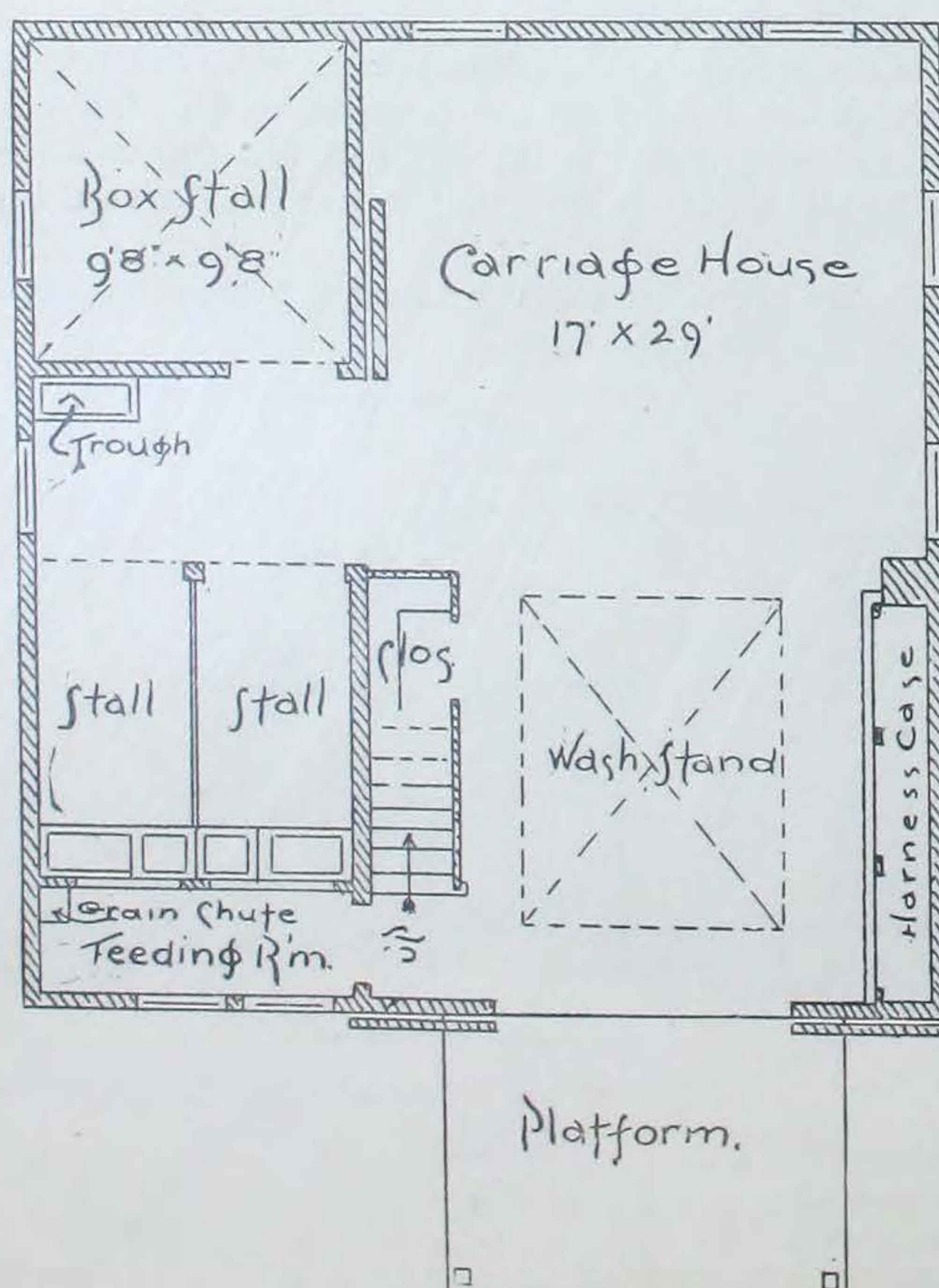
SPECIAL FEATURES.—The wash-stand is cemented, draining toward the centre where there is a sink.

The ventilator, which shows above the roof, is boxed down through the loft and opens into the ceiling above the stalls.

Two rooms for stablemen are finished (plastered) in the loft, lighted by the three windows shown on the view. The remainder of the loft is open.

Sliding door between the carriage room and stable room. The front doors slide also.

The hay shute and the grain shutes come down into the feeding-room.



GROUND PLAN. NO. 421



CARRIAGE-HOUSE AND STABLE DESIGN No. 422. PERSPECTIVE VIEW

DESCRIPTION OF DESIGN NUMBER 422

SIZE OF STRUCTURE: Front, 64 ft., 8 in., including shed. Side, 37 ft.

SIZE OF ROOMS: See floor plans.

HEIGHT OF STORIES: First Story, 10 ft.

MATERIALS: Foundation, stone; First Story, clapboards, Gables, shingles; Roof, slate.

COST: \$2,500, complete.

[See page 219 for information about details, specifications, bill of quantities and working plans of this design.]

NOTES

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Details of the Cornices, Windows, Doors, Gables, Trim, Mantels, Staircase,

Inside Finish, Colors, &c., &c. (these constitute the principal and distinguishing beauty of modern houses), are fully shown, on a large scale, in our Working Drawings, and careful directions for their execution are given in our Specifications.

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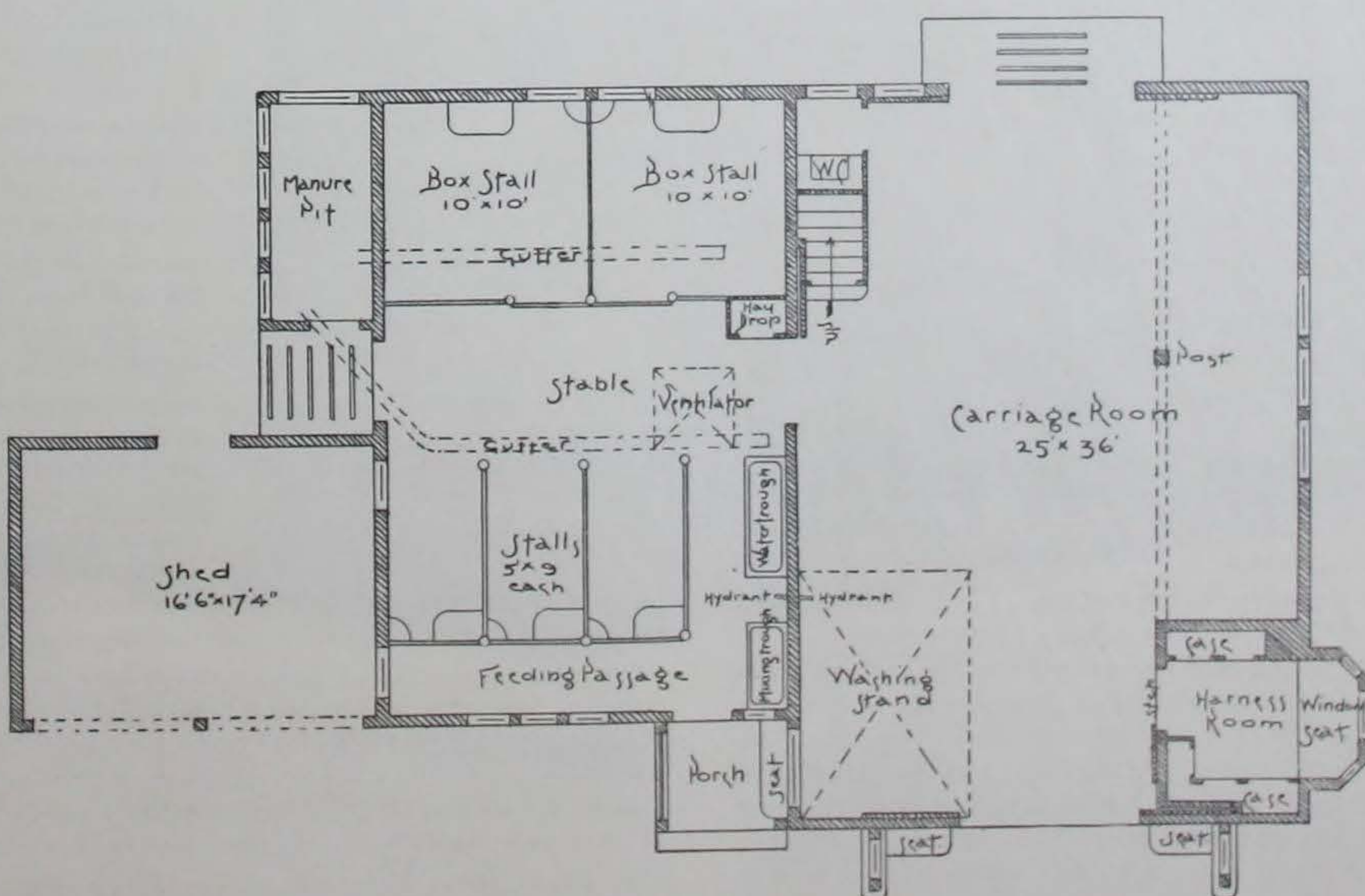
SPECIAL FEATURES.—Accommodations for five horses. Large carriage-room. Cemented washing-stand.

A water-closet under the stairway, entered from the carriage-room, with a window for light and ventilation.

The shed is for the shelter of visitors' vehicles.

Large harness-room with two cases. The loft is large, 30 by 45 ft., and is open to the roof except over the harness-room, where a room is finished off and plastered, for the stableman.

The entire interior of the first floor is ceiled with Georgia pine.



GROUND PLAN. NO. 422

LANDSCAPE GARDENING—BY S. B. PARSONS

I.—PLANTING A SMALL PLOT FACING SOUTH

THE principles of landscape art are few and simple; the application of them is as wide as the variety of plants and the combinations of them which can be made by the skillful artist. These combinations require not only a quick eye for the possibilities which are given by earth and sky, by the houses and plants which are already located, but they require also a reasonable knowledge of trees and shrubs.

The charm of nature is its infinite variety of expression; no two trees, no two leaves, no two petals are precisely alike; each one has its own form, its own shading, and its own curl; no one has its fellow. This infinite variety may not be apparent to the casual observer, but, it is there, and the landscape artist of the future will be the man or woman who can see the largest part of these variations, and seeing them freely, will combine knowledge with taste and produce scenes which may never equal but will nearly approach the wild perfection of nature. He may do more, and as the highest art is the idealizing of nature, he may succeed in throwing an ideal charm over his work in presenting more clearly to our limited conceptions, the infinite variations and combinations of beauty which are hidden from all but the careful observer. He may be, in comparison with others of his profession what Thoreau was and Burroughs is, in comparison with ordinary observers. Yet the ideal is based upon the actual, which for landscape adornment is a knowledge of trees, shrubs and plants. Without this knowledge there cannot be success, and with it there cannot be entire failure.

For our present purpose the highest art is not needed, for the size of the lot treated forbids the use of large trees; only shrubs or perhaps a few trees of the smallest class can be employed. There is needed no reaching for sky effects nor for deep shadows. Judicious grouping and grading of plants, with a careful eye to color, will give us all we desire.

There is a decided advantage in shrubs, they can be removed readily if study would favor a change of position, and therefore, for immediate effect they can be planted closely. They can be pruned freely if they interfere with each other. They give pleasure by their flowers as well as their foliage, and leave uninjured the turf which is often destroyed by the exhausting roots of large trees. It is rarely justifiable to plant large trees in a moderate sized town lot. The trees upon the sidewalk are enough for the front and it is not just to a neighbor to plant trees at the side which may become large and thus overshadow and exhaust his ground. There should be a law to prevent a man from covering his neighbors ground with a tree as there is now one to prevent his covering it with a part of his house. The golden rule is a good one, but it does not operate with all men.

On the next page will be found a list of shrubs which can be planted eighteen inches from the east and west lines and four feet apart. This distance will be sufficient for some years, after which they can be pruned to keep them as separate plants, or they can be allowed to grow together as a belt. If immediate effect is desired the list can be doubled and they can be planted two feet apart, to be removed when growing too thickly. These shrubs are located for a lot one hundred feet wide and one hundred and fifty feet deep, fronting south. If fronting north, west or east, the location of certain kinds would be different.

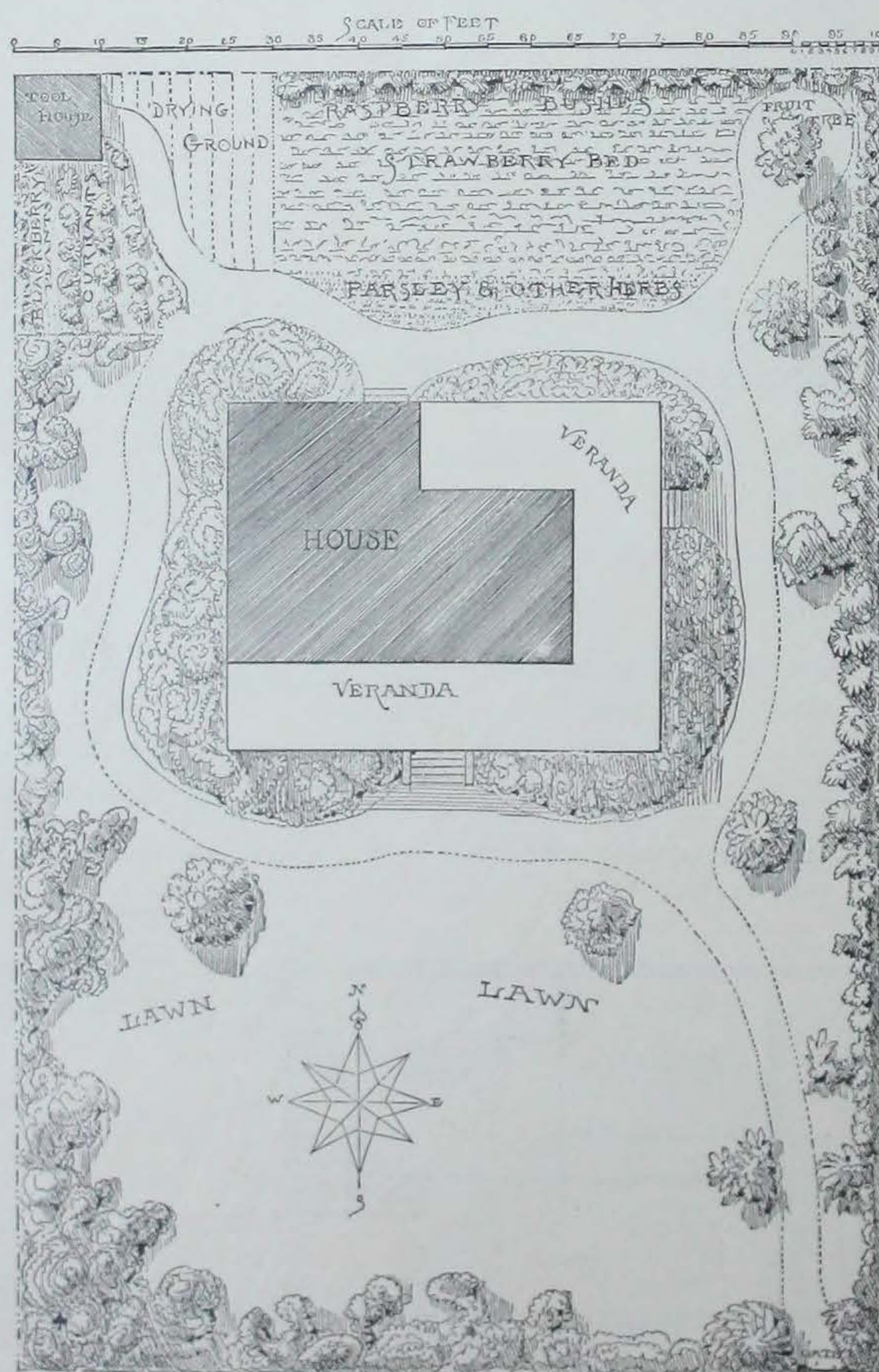
The walks are as few as possible. A walk should be made for utility only, as it requires labor to keep it clean. The smooth dry turf is pleasanter to walk upon. With this idea the western walk might be spared, but it balances well and is useful for promenading when the grass is wet.

The first shrub on the list for the side lines should be planted three feet from the front and eighteen inches from the side. The others should be continued in a straight line, according to the list, eighteen inches from the side, and four feet apart. The stiffness of a straight line will be broken by other shrubs to be planted against them.

The lines on the east and west side being planted, those on the list designated as second can be planted two to four feet inside the others. It is difficult to locate these without seeing the ground, for they will not be in a straight line but must be grouped at the side or in front of the others to produce the general effect which is sought to be designated on the plan. It should be borne in mind to keep the plants with colored leaves on the outside as much as possible, that they may be seen from the house.

The front line may now receive consideration. There trees may be admissible and should be evergreen. Let *Abies Alcockiana* be six feet from the west side line and ten feet from the front; *Abies Polita* twenty feet distant and seven feet from the front; *Picea*

Japonica twenty feet distant and seven feet from the front, and *Abies Pungens* twenty feet distant and ten feet from the front. Between these will be for some years vacant spaces in which can be placed without formality a Golden Oak, a Japan Judas Tree, a Japan Weeping Cherry, and a White Fringe, then for further filling, *Fraxinus Atrovirens*, *Andromeda arborea*, *Retinospora squarrosa*, Evergreen Thorn, American Holly. Between these again can be placed any of the evergreens of which we give a list, some of which can also be in front of some of the projections on the side lines. The vacant spaces between the large evergreens can be filled up with shrubs, evergreens, roses, etc., as may be preferred.



PLAN OF A PLOT 100 X 150 FEET, FACING SOUTH

These can be removed after some years when the growth of the large trees shall encroach upon them.

The centre of the clump on the front lawn at the southwest of the house should be a Weeping Sophora planted six feet from the walk; the next opposite the southeast corner of the house should be Salisburia, planted five feet from the walk; the third should be Chinese Cypress also five feet from the walk. Nearly opposite the Salisburia and on the side lawn opposite the path in front of the house should be a Weeping Hemlock, planted five feet from the path. The leading shoots of the Sophora and Hemlock should be trained to a stake until they are eight feet high and then allowed to fall. If desired they can be carried twenty feet. On the west side of the front gate can be a group of eight Rhododendrons and on the east side a group of four Kalmias. At the corners of the house should be planted four Salisburias; with their long branches covered only with leaves, they make the very best ornament for training under the eaves. The Japanese Ampelopsis can be planted three feet apart around the house if it is desired to cover it with foliage. They are very beautiful, cling to wood or stone, require no training and the leaves hang over each other making a sort of thatch which protects the house from rain.

The ground between the paths and the house should be turfed after there is grouped in it the low-growing shrubs and evergreens, such as *Spiraea crispifolia*, *Mahonia aquifolium*, *Biota elegantissima*, *Biota semper aurescens*, *Thuya Columbia*, *Thuya aurea*, *Thuya Vervæneana*, Silver Japan Juniper, Golden Japan Juniper, *Picea Hudsonica*, Golden Sun-ray Pine, Golden *Retinospora filifera*, Dwarf R. obtusa, Weeping R. obtusa, Golden R. plumosa, Golden Yew, *Andromeda Catesbaei*, *Azalea amœna*, *Daphne Cneorum*, Tea Roses, *Geraniums*, &c. A *Tamarix Indica* should go in the middle of the plot, south of the house, five feet from it, and west of the front steps, and an African tamarix in the middle of the plot, on the east side of the house, and north of the side steps a tree box can be planted each side of the front steps. Six Japan Maples could also be grouped together on the east side. A group of *Taxus* can be made on the south side of house. *Limonia trifoliata* trained on its south wall is very effective.

It is important that the soil immediately around the house and between it and the paths should be of the very best quality. Therefore, when the excavation is made for the house let the black soil be placed on one side, and with other black soil be used for grading from the house to the path.

It should be borne in mind that these shrubs being of nursery size, will be small enough for several years to leave space around them for the planting of all the roses and summer flowers that may be needed.

We have provided nothing for the outside of the sidewalk. If the lot faced west we should advise the Salisburia. It is always de-

sirable to keep open the view of the western sky and the remarkable sunsets of our climate; as the public requirement will not allow the absence of street trees, some sort must be placed there, and there is no tree like the Salisburia for giving broad glimpses between its leaf-clothed arms.

For a southern exposure, however, there is nothing so charming as the Schwerdler Maple; its rich tints in May and June cannot be surpassed. These should be planted on the outside of the sidewalk, those at the end twelve feet from the continuation of the lot lines and three others twenty-five feet apart.

Over the tool-house, in the northwest corner, can be planted vines of *Akebia*, *Aristolochia*, *Halleana* and variegated Honeysuckles, and on the south side *Tecoma grandiflora*. On the west fence near the tool-house can be planted five Early Wilson Blackberries, and between these and the walk six White Grape Currant and six Fay's Currant. On the east fence, opposite the last, can be planted five Kittatinny Blackberries, and near them six Downing Gooseberries. All these berry plants should be four feet apart. A Stump Peach tree can go in the centre of the path near the north fence, and after planting there may be found room for two more Peach trees—George IV and Old Mixon. The vacant space on the back fence will hold something less than two hundred Charles Downing Strawberries which should be planted in rows three feet apart, with plants in the rows fifteen inches apart. These should be allowed to make runners in the rows, but all young plants between the rows should be kept cut off. In odd places room can be found for half a dozen plants of Liemaen's Rhubarb, with, perhaps, a frame for early Lettuce.

Around the drying ground will be required high posts to hold the wires. On these can be placed grapevines, the best six of which are El Dorado, Golden Gem, Berckmans, Martha, Niagara and Miles. There are many other fine varieties which mildew and other causes make uncertain. For many reasons the autumn is the best time for planting deciduous things and the spring for evergreens. When everything is ready, however, in the spring, planting should not be delayed.

We think that our plan, if reasonably followed, will give pleasure and the interest in it will grow with its growth. Every plan, however, needs additional touches after the main planting is finished, as the true sculptor uses his chisel after the statue has come from the hands of his workman. This can be done year by year as growth shows the need of it. Our chief object now is to furnish a ground-work, every individual of which will give pleasure, for after all it is the individual element in material things that gives the enjoyment which the distant observer finds in masses. In a future number we will treat a larger space of ground where room can be found for many large growing trees which produce the sky and shadow effects that constitute the charm of ample and well planted grounds.

PLANTS FOR WEST SIDE, NEXT TO THE FENCE

Lilac President Massart
" Common White
" Josikæ
" Chinese White
Euonymus Europæus
" latifolius
" alatus
Eleagnus longipes
Colutea halepica
Calycanthus floridus
Cornus alba sanguinea
Viburnum oxycoccus
" japonicum latifolium
" plicatum
Lonicera fragrantissima
Spiraea prunifolia flore pleno
" Reevesiana flore pleno
Exochorda grandiflora
Forsythia viridissima
Rhodotyus kerrioides
Hydrangea paniculata grandiflora
" nivea

PLANTS FOR EAST SIDE, NEXT TO THE FENCE

Double Carmine Peach
" White
Paul's Hawthorn
Malus Halleana
Red Flowering Dogwood
Magnolia Thompsoniana
" atropurpurea
Stuartia
Magnolia stellata
Rose Acacia

Sambucus laciniata
Berberis atropurpurea
Deutzia candidissima flore pleno albo
Symphoricarpos racemosus
Celastrus orixa
Clethra alnifolia
Cydonia japonica Mallardii
" simplex alba
" Moerlosii
Spiraea opulifolia aurea
" Douglasi
Ribes Gordonianum
Philadelphus coronarius
Prunus triloba

PLANTS FOR EAST SIDE, SECOND ROW

Golden Elder
Prinos verticillata
Hydrangea quercifolia
Hypericum aureum
Dwarf, Double White Almond
" " Red
Deutzia gracilis
Viburnum nana
Weigeleana variegata
Spiraea Thunbergii

PLANTS FOR WEST SIDE, SECOND ROW

Golden Leaved Syringo
Californian Privet
Berberis Thunbergii
Euonymus nanus erectus
Itea Virginica
Cydonia japonica tricolor
Daphne Genkwa
Daphne Mezereum

PLANTS FOR FRONT LINE

Abies Alcockiana
" polita
Picea japonica
Abies pungens

PLANTS FOR FRONT LAWN

Weeping Japan Cherry
Golden Oak
Retinospora squarrosa
Audromeda arborea
Fraxinus atrovirens
5 Salisburia
Weeping Hemlock
Weeping Silver Fir
Weeping Norway Spruce
Hemlock macrophylla
Dwarf Black Spruce

Japan Judas Tree
White Fringe
Evergreen Thorn
American Holly
Weeping Sophora
Chinese Cypress
4 Kalmias
8 Rhododendrons
10 Hardy Azaleas
10 Hardy Roses

BETWEEN PATHS AND HOUSE

Tamarix indica
Spiraea crispifolia
Biota elegantissima
Biota semper aurescens
Thuya Columbia
" Aurea
" Vervæneana
2 Tree Box

Tamarix africana
Mahonia aquifolia

PLANTS BETWEEN PATHS AND HOUSE

Silver Japanese Juniper
Golden
Picea Hudsonica
Golden Sun-ray Pine
Golden Retinospora filifera
" plumosa

Dwarf Retinospora obtusa
Weeping
Golden Yew
Andromeda Catesbaei
Azalea amœna
Daphne cneorum
18 Japan Ampelopsis
Limonia trifoliata
Washington Yew
6 Japan Maples—east of path
Tree Pæony

PLANTS FOR STREET

4 Schwerdler Maple

PLANTS FOR THE TOOL-HOUSE

Akebia
Aristolochia
Honeysuckle Halleana
" variegated
Tecoma grandiflora

FRUIT PLANTS

5 Early Wilson Blackberry
5 Kittatinny
6 White Grape Currant
6 Fay's Red Currant
6 Downing Gooseberries
15 Cuthbert Raspberries
200 Charles Downing Strawberries
3 Peach Trees
6 Linnaeus Rhubarb
6 Grapevines—El Dorado, Miles, Golden Gem, Berckmans, Niagara, Martha

The Estimated Cost of the Plants in the foregoing list is \$175

ABOUT PICTURE HANGING AND PICTURE FRAMES

IF the owner of a home is fortunate enough to possess many good pictures, the problem of covering and decorating the wall spaces is simple. All there is to do is to paint, paper, or distemper the walls with such a tint as shall form a good background for the pictures. A rich brownish green will be found one of the best tints for this purpose.

Whenever elaborate and expensive wall decorations are proposed for a residence we feel that we must advise against it. Why? Because however fine they may be they scarcely excite a momentary feeling of interest and pleasure. In the place of elaborate decorations we suggest pictures—plenty of good pictures. Plain walls are the best to display pictures and the inexpensiveness of plain walls provides a fund, so to speak, to spend on art.

The arrangement of pictures symmetrically so as to produce a sort of uniformity in size and disposition is always pleasing, as is all true symmetry. In a small room the eye takes in the whole of the picture at a glance and rests with content upon such a disposition of parts. On the other hand, if the pictures are of all sizes and hung without any regard to this principle, they look incongruous, as if they were not worth the trouble of arranging properly. It is not always that our stock of pictures will be sufficiently near in size to enable us to distribute them equally. Still, if they are judiciously arranged, we may do away with the objection in a great measure. If it is engravings alone we have to hang, it is an easy matter to get them in pairs of a uniform size. With a mixture of oil paintings and engravings this cannot well be done, but with care and good taste even these may be so arranged that they will not clash with one another.

The practice of hanging pictures so that they shall project forward at their tops is a question of position as to light. When the light falls full upon a picture, whether a varnished oil painting or a framed engraving or water-color, there is a glare or brightness which prevents the whole of the picture from being seen. This is a common case, and the only means of avoiding it is to let the picture hang out from the top so that we can see the whole of it from any part of the room without this objectionable light upon its surface. This is effected by placing the rings of the frame low enough down to cause the picture to have the desired inclination. It is a good plan, when about hanging a room with pictures, to make a sketch of the proposed arrangement previous to commencing hanging. This saves much after-labor and vexation. The largest picture should always have a central position, so that those of a less size can be symmetrically grouped around it. The eye will be satisfied by such an arrangement. The character and form of the frames is a very important factor in the question. Engravings and water-color paintings should always have a broad margin to the mount and a narrow light frame. The margin serves to isolate the painting or engraving, and thus enables us to see its beauties to a much greater advantage. This is more especially the case if the wall upon which they are hung has a pattern upon it. These frames should be alike in make and breadth as far as possible.

Oil paintings require a different and much heavier frame than water-colors and engravings. The principal object in both cases is to display the painting to the best advantage. The broad margin does this with water-colors, but the oil painting having no plain margin we must depend upon the frame to effect its isolation. In our opinion a great mistake is often made in having these frames too elaborately ornamented, although some pictures will bear more ornamental frames than others. It is not the frame we want to exhibit but the picture.

In the hanging of pictures there are several points necessary to be attended to in order that they may be safe and easily adjusted. A picture molding firmly secured to the wall just underneath the cornice or frieze, upon which hooks are made to slide along, not only affords a firm support, but is an addition to the decoration of a room. This molding may be made and fixed by any ordinary joiner, or may be bought at most of the paper-hanging establishments, in gilt, black,

or in various woods in combination with gilt beads. The hooks also may be procured from the same source. Brass rods have been much used for hanging pictures from, but they are not so serviceable or neat-looking as a picture molding, they are also soon spoiled by the action of the gas and moisture in the room, which eats into and destroys the lacquer. They are now but little used.

Strong wire, cord or line, both "gold" and "silver," is now made, of different thicknesses, for hanging pictures, and is admirably adapted for the purpose, being very thin but capable of bearing great weights. All picture cords of whatever kind should be as near the color of the wall upon which they are put as possible, in order to cause them to be but little seen. Too many cords are always objectionable.

It is better to hang the picture with straight cords, that is to loop the cord onto two hooks so that it shall be perpendicular at each side of the picture, and not looped onto a single hook or nail. When one picture is hung beneath another the bottom one should be hung from the one above and not from the top; we thus avoid multiplying the cords, which is always objectionable. Pictures may also be hung without any cords showing by crossing the cord through the rings at the back of the picture, and looping this into a nail or hook; neither cord or hook will then be seen. When picture moldings are not fixed, strong nails may be used having earthenware, china, or brass heads on them. These screw onto the head of the nail, so that the nail may be knocked into its place and the head screwed on afterward. These are very neat and have a good appearance, and always clean up well.

Pictures of all kinds should be kept free from dust at the back, for where this accumulates injury is sure to result. To effect this two pieces of cork at the bottom edge of the frame will keep the frame from the wall, relieve the pressure, and allow the dust to a great degree to fall down and be cleared away. Gold frames should never be dusted with anything but a feather brush, and when they become dirty, servants or inexperienced persons should not be allowed to attempt to clean them, as they will be sure to spoil them. In cleaning the glass of water-color paintings and engravings, the greatest

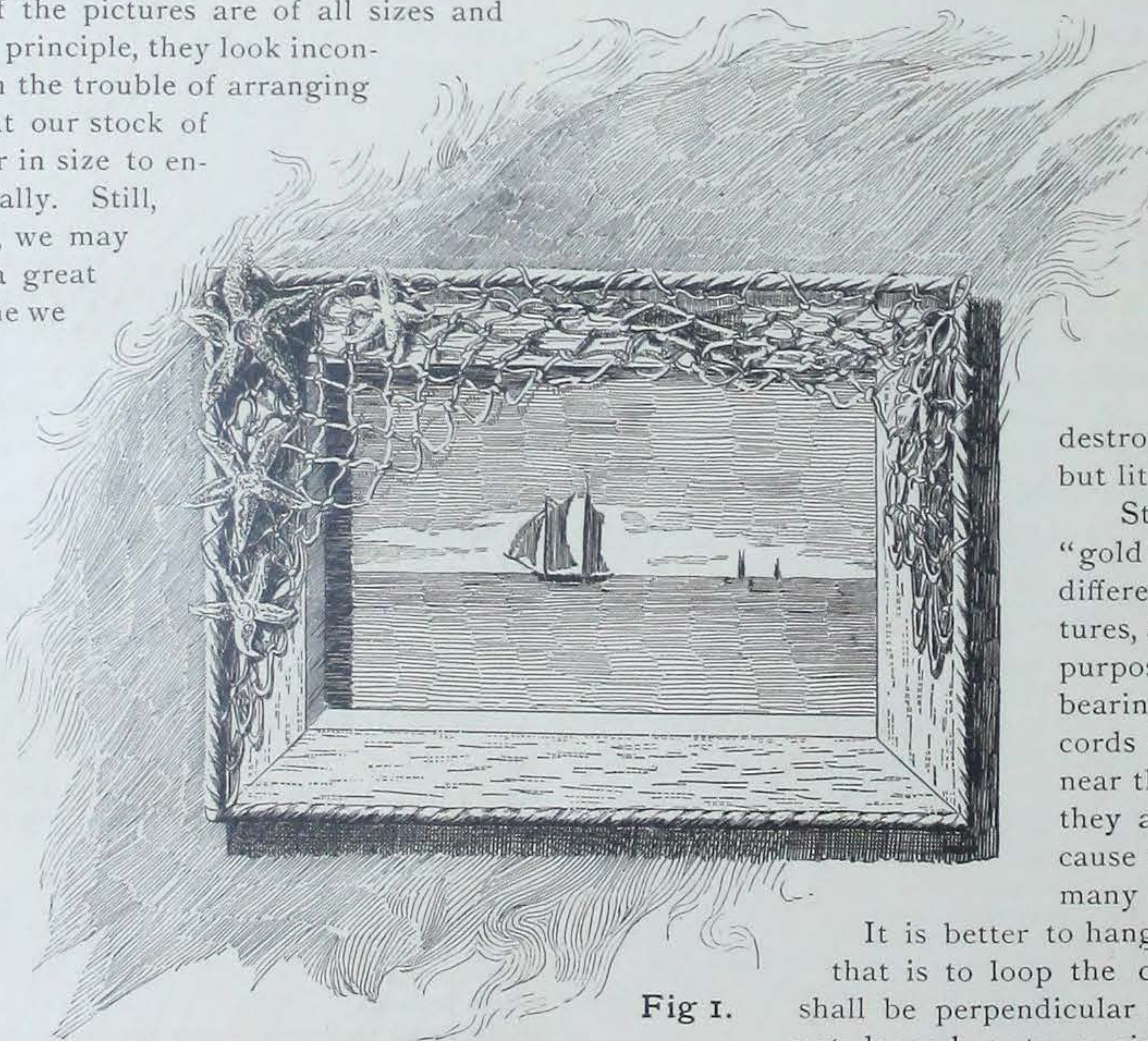


Fig 1.

care should be used to avoid rubbing the frames. They never should be wetted with the sponge or leather, or they will soon be spoiled.

We will conclude this article with a contribution by Miss Adelia B. Beard, which shows very plainly that we need not always patronize the dealers for our frames:

A picture frame as a rule, is quite an expensive article, but with a little ingenuity and good taste, almost any art student may manufacture frames, if not of equal finish, at least as durable and quite as artistic as any the dealer can produce.

The cost? The cost is the price of a wooden stretcher and a bottle of gold paint.

The first sketch shown here (figure 1.) will give some idea of the appearance of a frame decorated appropriately for a marine picture. The articles necessary for this frame are a stretcher, some rope,

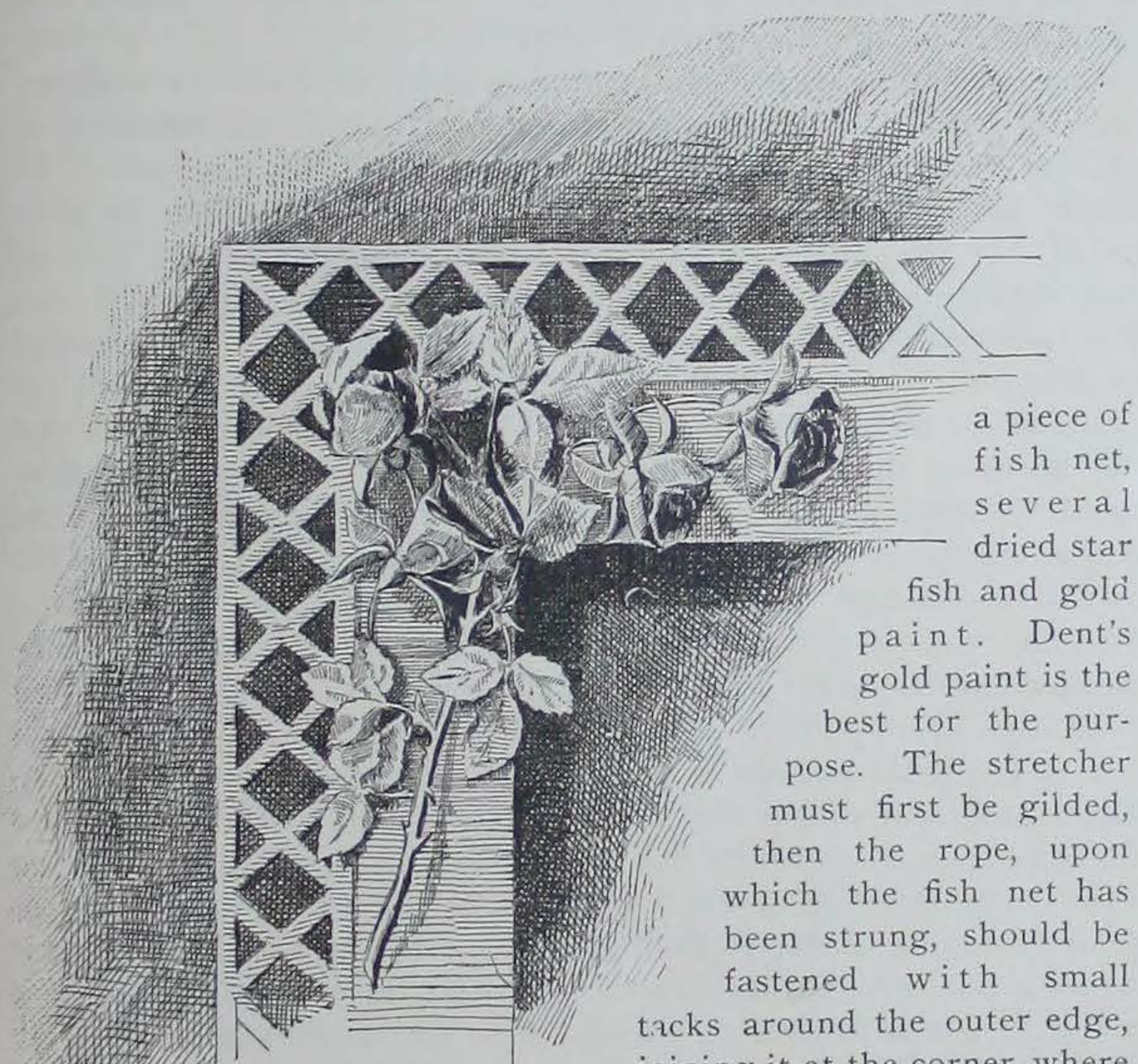


Fig. 2.

The net must be large enough to

drape gracefully across one corner, along the top, and fall a short distance down the other side of the frame.

When the star fish, graduating in size, are tacked around the draped corner and they, as well as the rope and net, are given a coat of gilt, a pretty, unique and substantial frame is the result. If star

a piece of fish net, several dried star fish and gold paint. Dent's gold paint is the best for the purpose. The stretcher must first be gilded, then the rope, upon which the fish net has been strung, should be fastened with small tacks around the outer edge, joining it at the corner, where the star fish will hide the ends.

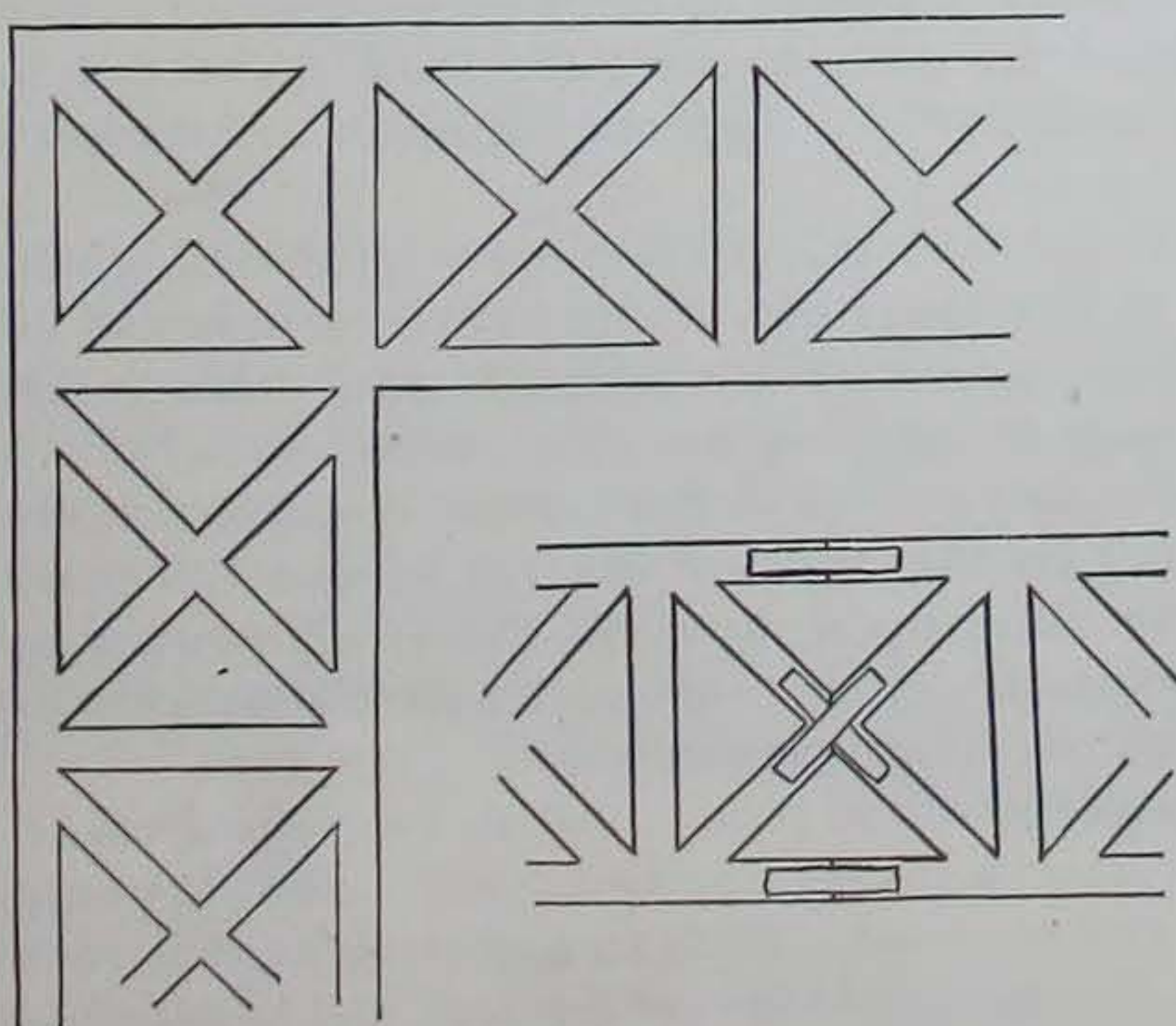


Fig. 3.

fish are not to be had, sea shells may be used instead (these of course will have to be glued in place), and if fish net is also out of reach, a piece of fine netted hammock can be used as a substitute.

For the benefit of those who spend their summers at the seashore where such things are obtainable, I would advise that a small collection be made of these quaint and pretty products of the place, as they will be found useful in various ways for decorative purposes. In drying star fish, wash them first in fresh water and then spread on a board in a dry place (not in the sun), and leave them undisturbed for a few days.

The next sketch (figure 2) shows a corner section of frame especially appropriate for a flower piece. The open lattice-like border is cut with a sharp penknife from stiff pasteboard and tacked along the edge of the frame.

The pattern shown in diagram is simple, quite easily made, and well suited for a border, though other and more elaborate ones may be used. This border must, of course, be made in sections. The edges to be connected should be cut to fit exactly, then after tacking them upon the frame the whole may be laid upon a table, face downward, and strips of paper pasted across the joints (see figure 3), which will hold them securely together. If the work is neatly done, when the gilt is applied all traces of the joints will disappear. The decorations of this frame consist of a spray of artificial rosebuds and leaves, gilded and tacked on the upper left hand corner. A few scattered rosebuds look well upon the lower part of the frame near the right-hand side.

The last sketch, figure 4, is the section of a frame which will look well on almost any kind of picture. It is made by tacking a small rope around the inside edge and then covering it and the frame with crumpled tin-foil, which, after it is pressed to fit the rope, is brought around and tacked on the wrong side of the frame, joining that edge which is turned over the top. Care should be taken while handling

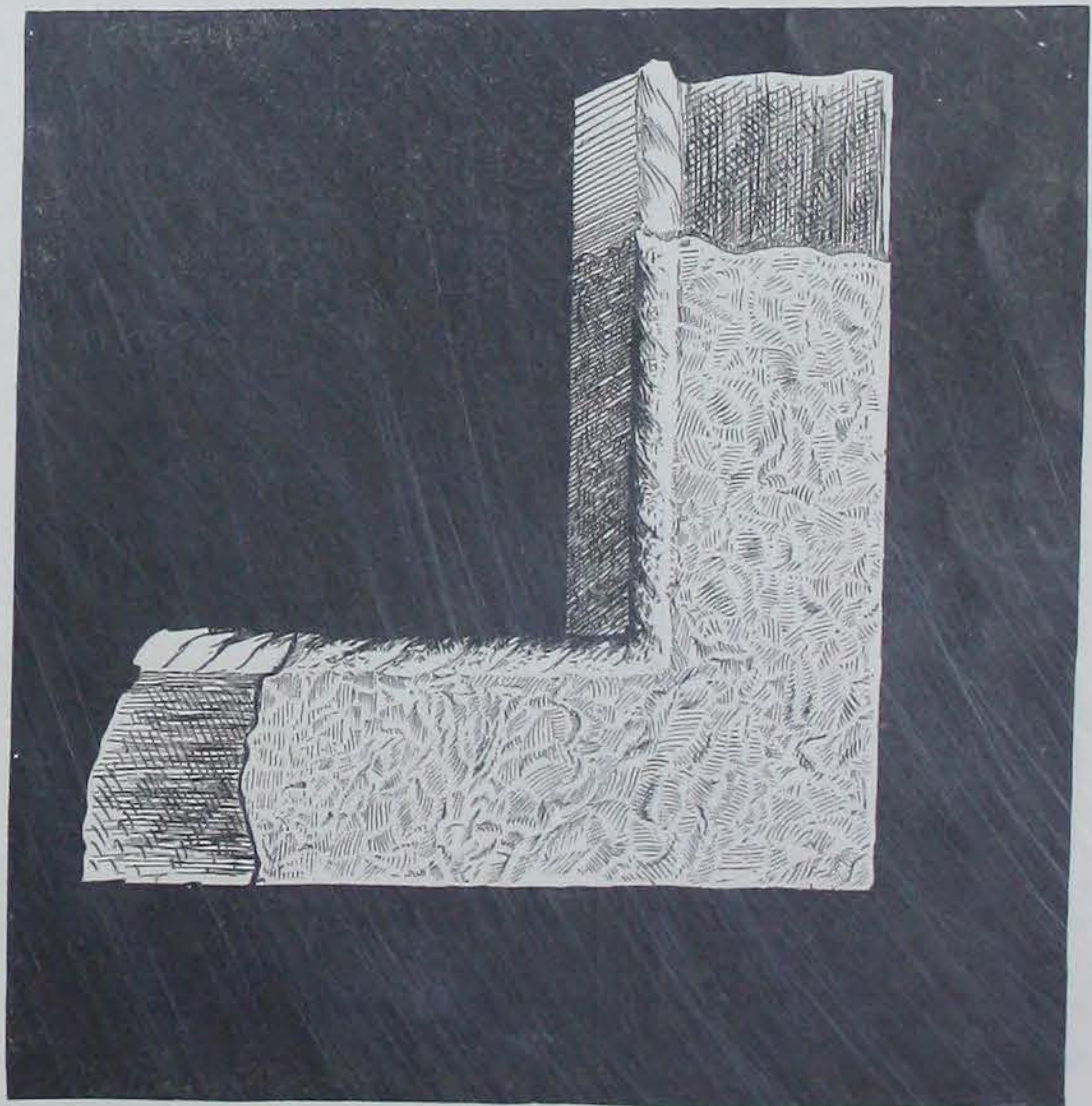


Fig. 4.

the tin-foil not to flatten it, as its beauty depends upon its roughness. The pieces are joined by simply lapping one edge over the other, the uneven surface hiding all seams. This frame like the others must be gilded.

A very effective rough surface on a frame can be produced by dabbing on it with a palette knife the scrapings of the palette. Of course this frame cannot be made in a day, but if every time the palette is cleaned the paint is used in this way, it will not be long before the surface is covered and ready for gilding.

There are as many ways of decorating frames as there are individual tastes. The descriptions given here are offered more as suggestions which an inventive mind may take hold of and alter to suit its own purpose, than as fixed styles which cannot be changed.

THE REMOVAL OF HOUSE SLOPS, &c.

BY CHAS. F. WINGATE, Sanitary Engineer.

WHERE householders have no interior plumbing, but are content with outdoor privies or earth closets, it is not necessary to provide any very elaborate arrangements for getting rid of the house slops. Under no circumstances, however, should they be thrown upon the ground near the house, as mischief will surely follow this nasty and uncleanly practice. Hundreds of cases of diphtheria and typhoid fever have developed from thus saturating the ground near to dwellings with slops. Instead of this reprehensible practice, let the householder provide an empty kerosene barrel on wheels which can stand near the back door entrance way and receive domestic slops, and afterwards be rolled to a safe distance and emptied at brief intervals. Such a barrel, if painted within and without, will not become an eye-sore or cause offense.

The accompanying sketch, Fig. 1, shows a simple plan of arranging a drain from a kitchen to receive waste water from a pump, and to act as a receptacle for kitchen slops. It is important that the tile drain should be laid close to the surface, with open joints, and have a good fall, and that the sink opening should be ample to prevent saturating the ground about it. A wire strainer should also be placed over the opening to exclude rags and other articles which might stop up the pipe. Such drains are common in many houses, but they are generally constructed of rough plank laid with little fall, and hence they accumulate slime and other refuse and become noisome. If they are let discharge into a stagnant ditch or muck heap or slough, they may breed dangerous odors, especially if they are not trapped, and the end terminates just inside the kitchen. It is therefore better to make such drains of smooth earthen pipe and have a clear outfall

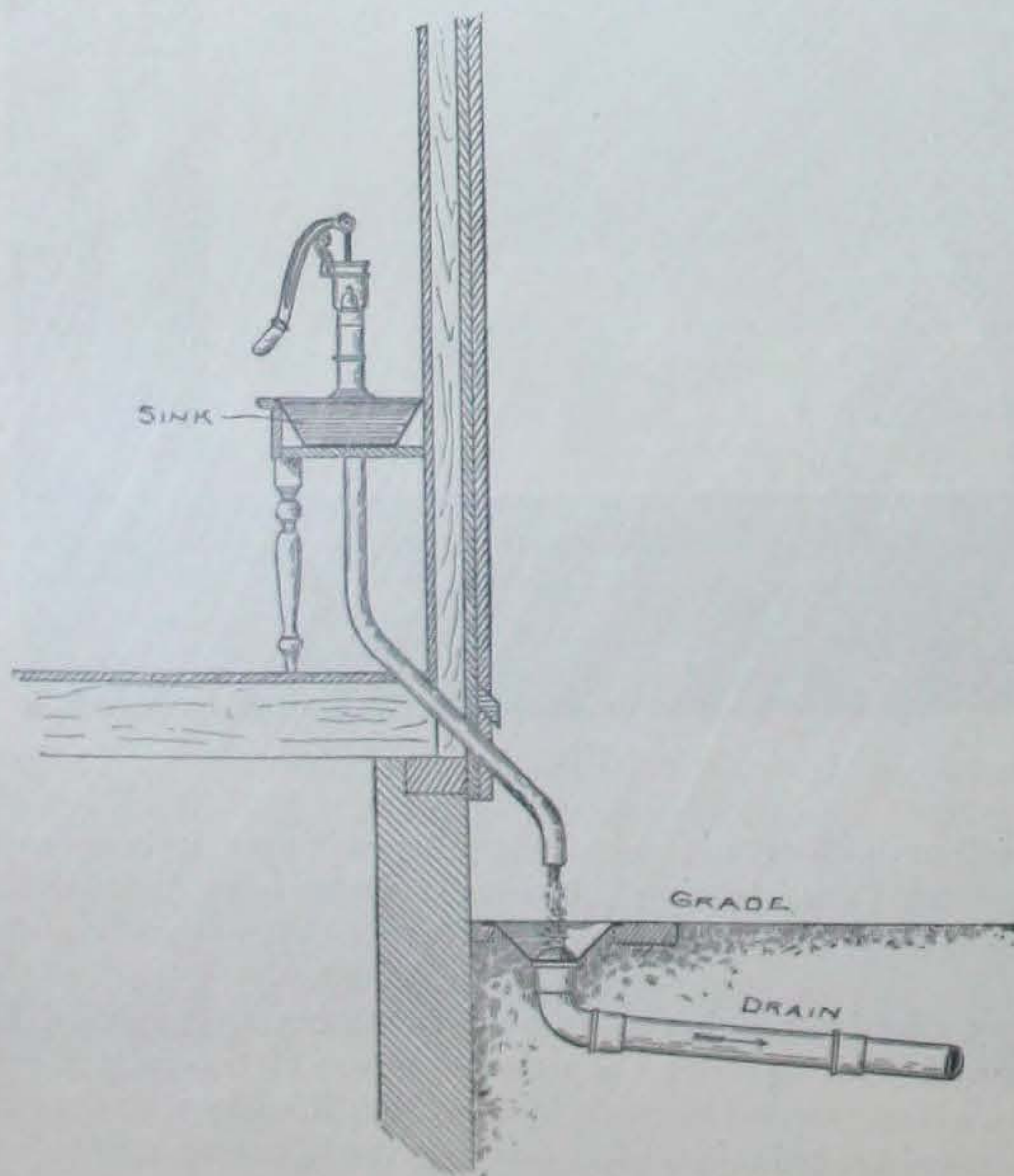


Fig. 1.

above ground, if possible, which may be in the barn yard or pig pen. The joints on this drain may be left open, and the fluid contents allowed to soak through them into the soil if it is sufficiently porous.

A good plan is to make a square wooden trough, raised above the ground, with a good slant, and running from the kitchen sink to the stable or other safe place. This can be covered with a board to keep out the sun and snow, and occasionally during a sharp rainfall this can be taken off and the drain scoured thoroughly.

The chief practical question in arranging to drain an ordinary dwelling is to avoid having superfluous fixtures in the basement or cellar, so that the main drain can be kept as near to the surface of the ground as possible, and the cess-pool thus be as shallow as practicable. If the drain could start from the house at the ground level, then supposing the cess-pool was fifty feet distant, and that the drain had a fall of even one in twenty-five, the drain would connect with it not more than two feet below the surface, and the outlet would be at the same level. The cess-pool need not in that case be more than six feet deep at the most, while any overflow would be distributed close to the surface of the ground, where the roots of the grass and trees would have a chance to absorb it, and the air would penetrate through the soil and oxidize it. But if, as is often the case, the house owner insists on having a set of wash tubs or other fixtures in his cellar, then the house drain must start at this lower level, and by the time it reaches the cess-pool it will be five or six feet below the surface if the ground is level. This requires digging an unusually deep and expensive cess-pool, while the overflow will be at such a depth that but little benefit can be derived from it.

In the majority of houses a cess-pool is the only available means for disposing of domestic drainage. As ordinarily constructed, it is merely a hole roughly dug in the ground with stone or brick sides and arched top, the whole covered with soil and sods so as to be hidden from view. If the soil is very porous the fluid contents of the cess-pool, or "soak" pool as it was originally called, will leach away, and on opening it there will be little solid material left to remove. But even in gravelly soil the ground directly under the cess-pool will in time become clogged with grease and other solids, and the liquids will be retained until the hole is filled up and then it will have to be abandoned and another one dug near by. It is common to find half a dozen such receptacles filled and thus left fermenting to be a source of possible danger. Too often it is only discovered that the cess-pool is full when its contents back up through the house drain, saturating the ground about the foundations and forcing its way into the cellar. More than one outbreak of sickness has been traced to this cause.

If the cess-pool is dug in clay or other tough soil, it will soon fill up and have to be cleaned out, often at great expense and annoyance. The drain connecting with the house is also liable to choke with grease, and must be taken up and cleaned periodically. The longer and the larger such a drain is, the quicker it will choke, especially if it has little fall, so that the flow is sluggish and the grease readily chills. I have taken up a thousand feet of five-inch drain almost closed with grease from this cause, and I have known similar lengths of pipe to require taking up every year at great cost.

It is therefore wise and economical to keep the grease out of the drain by providing a grease trap which will retain it where it can be easily got at and removed. Such an appliance as that shown in the annexed cut, Fig. 2, is good for the purpose and is not expensive. It will serve also to keep the cess-pool free from grease and thus assist soakage and cleansing. Bear in mind that the decomposing grease creates the worst stench, and that a kitchen drain or cess-pool smells viler than any vault or closet.

So long as pan water-closets with an insignificant flush were used, in most dwellings cess-pools were less liable to be filled up, but with

the modern improved water-closets, consuming a couple of gallons of water every time they are used, there is greater chance of cess-pools overflowing and their contents backing up through drains. Under such conditions the volume of sewage will be largely fluid, and hence can be easily pumped out and spread upon a garden. It therefore

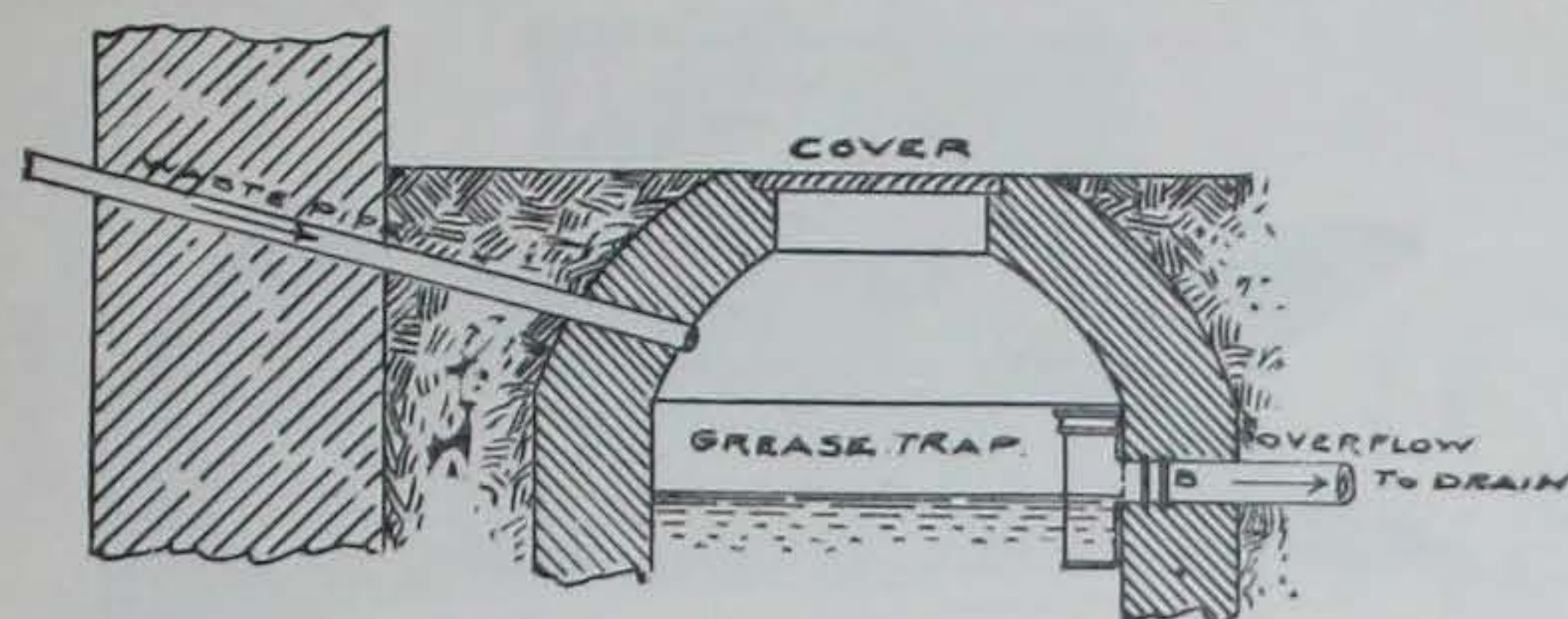


Fig. 2.

seems as if there was no alternative, and that either a cess-pool must be made large, and hence costly to construct, that it should have ample means of overflow, or that it should be frequently cleaned. This last remedy is expensive, and a householder may well object to spending \$100 or more every year to clean his cess-pool, when by a little more outlay he might abolish it altogether.

The risks from cess-pools are threefold. First: from the creating of foul and dangerous gases which have no escape except into the house. Second: from their contents overflowing and backing up, especially if rainfall is admitted into them and percolating into wells and cellars. Third: from permanent soil saturation, resulting through the constant pollution of the earth around. All these are grave, important dangers, worthy of serious consideration. The common belief that kitchen slops are entirely harmless, either in a cess-pool or when emptied on the ground, is a great mistake. Such refuse, as already stated, when putrid, is no less offensive than water-closet waste; and quite as much, if not more, care is therefore to be taken in disposing of it.

It is hardly necessary to warn householders of the danger of placing cess-pools near wells, in any soil and especially in a porous one. Even at a distance of fifty feet there is risk of pollution especially if the well is very deep and the soil below the cess-pool contains rifts or cracks through which its contents may seep into the well.

The overflows of cess-pools are often badly contrived. It will not do to allow the superabundant sewage to lie upon the ground, exposed to the sun, and polluting the atmosphere. Nor is a shallow ditch, without fall or flushing current, much better. Such arrangements are certain to cause trouble in time. So long as the material is spread over a sufficient area to be quickly and freely absorbed by the soil, and to be sucked up by the roots of grass and other vegetation, no fault can be found; but what is specially objectionable is to allow the surplus sewage to remain exposed over a limited space, where it cannot be absorbed and where it must stagnate and breed miasma. Some persons throw stable manure under their cess-pool overflow and compost the material. This is not a bad arrangement if it is looked after carefully, but such material is not very absorbent and must be frequently replaced.

As to the ventilation of cess-pools there seems to be a difference of opinion. Most persons pile planks and stone and sods carefully over them, and thus prevent any escape of air excepting through the drains leading from their houses. Colonel Waring says that sometimes ventilated cess-pools give offense, and E. S. Philbrick remarks that there may be a down draft in the ventilator. It seems to me that the whole question depends upon the amount of ventilation, and that, if sufficient openings are made to admit the air freely, all foul gases will be oxidized and their offensive properties destroyed. Again, persons are very apt to fancy that they perceive an unpleasant smell if there is an opening from a cess-pool in sight. The imagination has much to do with these things. In ventilating cess-pools one opening will not suffice, as may be illustrated by the following simple experiment: Close a common wide-mouthed pickle bottle with a bung. Into this put a piece of tubing of any kind, about a foot long. Fill the bottle with smoke from a pipe stem or glass tube. Then blow across the top of the pipe, and it will not clear the bottle of its smoke. Now, repeat the experiment, but previous to doing so, make a hole in the bung, into which place another short piece of pipe, then blow across the

upper opening, and the bottle will be cleared of smoke as if by magic.

Where, as is common, a cess-pool is covered with a piece of flagging, I usually advise having the latter raised a few inches by placing a brick under each corner, so as to allow the air to escape around the sides, where foul odors may be partly absorbed by the vegetation, and this has generally been found satisfactory. If the soil-pipe of a house is carried up to the roof and has few openings upon it, it may do to ventilate the cess-pool through this pipe, provided there is a large grating at the top of the latter, but it is always preferable to have a trap on the main drain between the house and the cess-pool, with an air inlet opening at some convenient point. This is to avoid the chance of cess-pool air being drawn through traps or possible leaks into living rooms, a possibility at all times with our highly heated houses, and it is best to avoid the risk. Mr. J. C. Bayles recommends covering cess-pools with a flagstone, having a hole about eight inches square in it, containing a wooden chimney six feet high, into which wire screens covered with charcoal as a deodorizing material may be placed. The chimney should have a cover open at all sides to exclude rain and to keep the charcoal dry, and one side should be hinged like a door to give free access, so as to remove the wire screens from time to time. This arrangement seems feasible, though I do not know if it has been practically carried out.

In many thousands of towns and villages where the expense of sewerage is too great for the resources of the property owners, or where the latter are not sufficiently intelligent to appreciate the benefit of such outlay, some other method of drainage must be provided. There is a large field for experiment in this direction. Often sewers are impracticable from the difficulty of obtaining an out fall. Again, the ground may be too level to secure a proper grade, notably at the sea-shore; while the risk of causing a dangerous nuisance forbids discharging sewers into ponds, streams, or even into the ocean in the neighborhood of occupied houses or bathing places. Some other method of drainage must therefore be employed. The cess-pool system may do with modifications. Irrigation farms have been constructed to dispose of the drainage of many European towns, but it is not always possible to obtain land that is suitably located, or that is cheap enough for the purpose. Neighboring residents will object to living near a sewerage farm, and will insist that it is a nuisance and dangerous to health. If it is placed far away from thickly settled centres, then the cost of reaching will be heavy, and there are other difficulties to be overcome. Of some of these methods of domestic sewage disposal I shall speak on another occasion.

PRIVIES

No water, garbage, ashes, house slops or other refuse should be thrown into a privy vault. By excluding such material and keeping the vault dry and well ventilated, the annoyance from flies, mosquitoes and spiders will be greatly reduced. The contrast between a privy that is well cared for and one that is not is surprising.

By planting quick-growing vines around an out-house it may be hidden from view and thus the important requisite of privacy will be secured. It will also be shielded from the hot sun; the vegetation will assist in purifying the air, and the roots will suck up the valuable fertilizing material from the soil. A wind-break of evergreens should also be provided to shield the place in winter and an arbor to keep off the rain, while a board or gravel walk will be a valuable addition. If we must have these outdoor necessities let us at least see that they are as little objectionable to the eye and other senses as possible.

EARTH CLOSETS

In every country house where there are no plumbing conveniences, an earth closet should be provided for the use of invalids and delicate persons and for women and children in severe weather. This appliance was first recommended for modern use by the Rev. Mr. Moule, an Englishman, and it has been extensively introduced with excellent results. Its simplicity, economy, and convenience are readily apparent. Its features are briefly as follows: A cemented box or vault which can be readily cleaned or removed, with a supply of dry earth or sifted ashes,—say a barrelful for an ordinary household—a portion

of which is daily deposited over the contents of the vault. The effect of this slight covering is to deodorize the material, absorb all liquids, and render the whole innocuous, as well as to preserve its full value as manure. There is thus no waste in economy, no risk to health, and no source of offense to the senses. If the earth closet is situated conveniently, yet not too near to living-rooms, and is promptly cleaned, it is a wholesome arrangement in private dwellings. A number of patented devices of this kind have been introduced and are to be had, but they are expensive, and while claiming to be automatic are very liable to get out of order. Sometimes the deodorizing material will hang suspended in the reservoir, and has to be jarred down before the discharging apparatus will work. But the principal difficulty is that it is seldom thrown where it is most needed, and that the dust is inconveniently deposited on the seat.

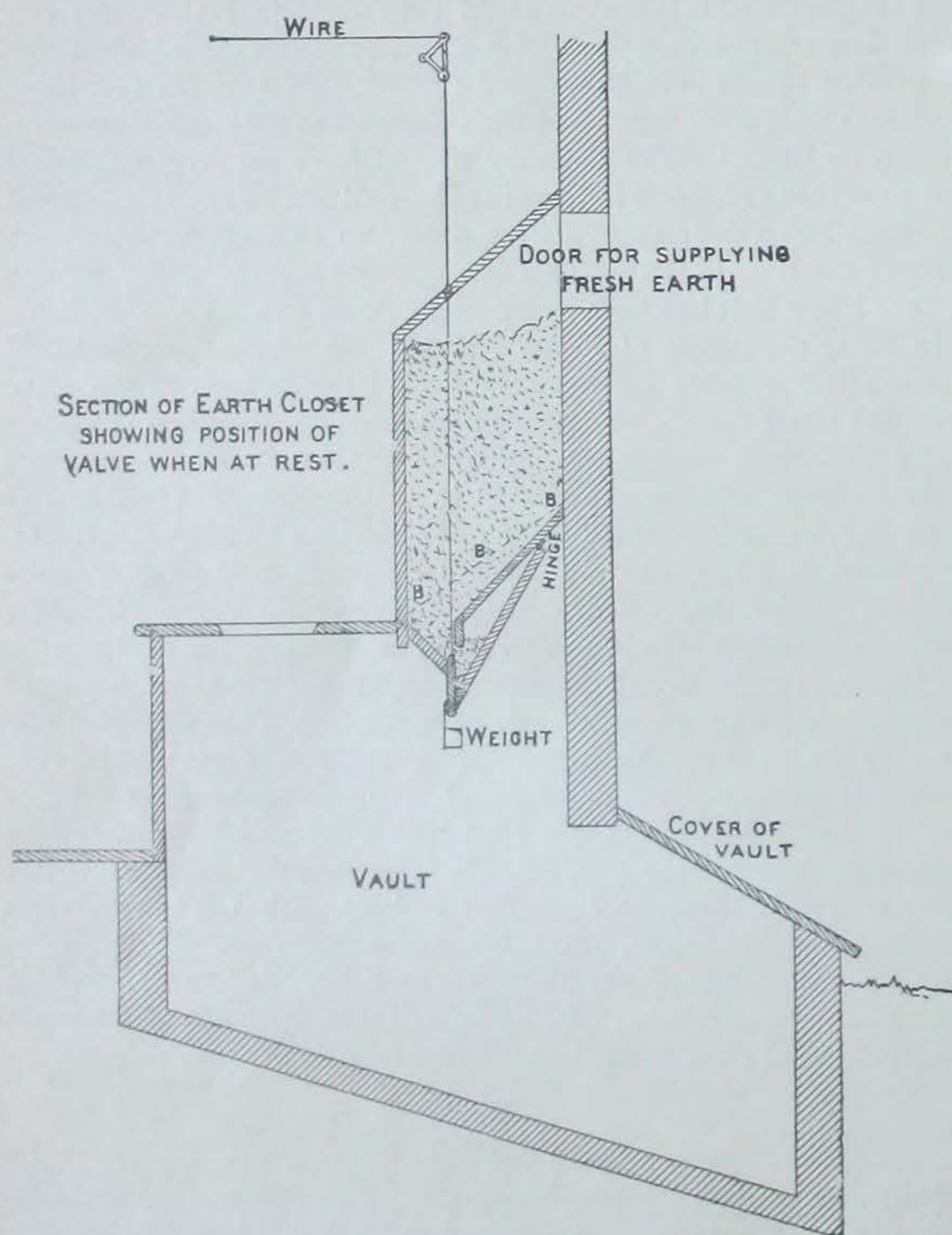


Fig. 3.

Figure 3 shows a somewhat elaborate design for an earth closet but it can also be made by an ordinary mechanic. The multiplication of such devices would effect a vast improvement.

The reservoir or hopper is filled from the outside. A lid of plain boards is hinged to the back of the hopper. When at rest the weight of the earth holds the lid back, the opening being closed by a slide. By pushing in a lever, pulling a cord, or other means, the inverted lid is thrown forward and the slide raised, shutting off the descent of earth, but throwing the portion already contained in it over the vault in a uniform sheet. On the relaxing of the impulse the weight draws the slide back and supplies the measurer with a fresh dose. By regulating the front edge of the measurer the sheet of earth may be directed as required. B B B is a sheet of wire netting fixed in the hopper, which serves to sift the earth and to prevent it from packing so firmly in the bottom as to impede the movement of the measurer. The jar communicated to the apparatus shakes down the earth, a matter of some importance. The vault may consist of tight plank boxes on wheels, so as to be easily rolled out. Otherwise a shallow pit lined with 8-inch brick, with sloping bottom of bricks on edge, also laid in cement, is necessary.

Figure 4 shows a simple form of earth closet devised by Mr. J. C. Bayles, which can be made by any one who has any skill at carpentry and at trifling cost. The inventor says:

The body is a plain pine box. Its sides are not over 14 inches high; its depth is 18 inches (measuring from front to back), and in length about 30 inches. It is divided into two compartments, one 18 x 18 inches and the other 18 x 12 inches. The larger of these compartments has no bottom; the smaller has a tight bottom. On top I

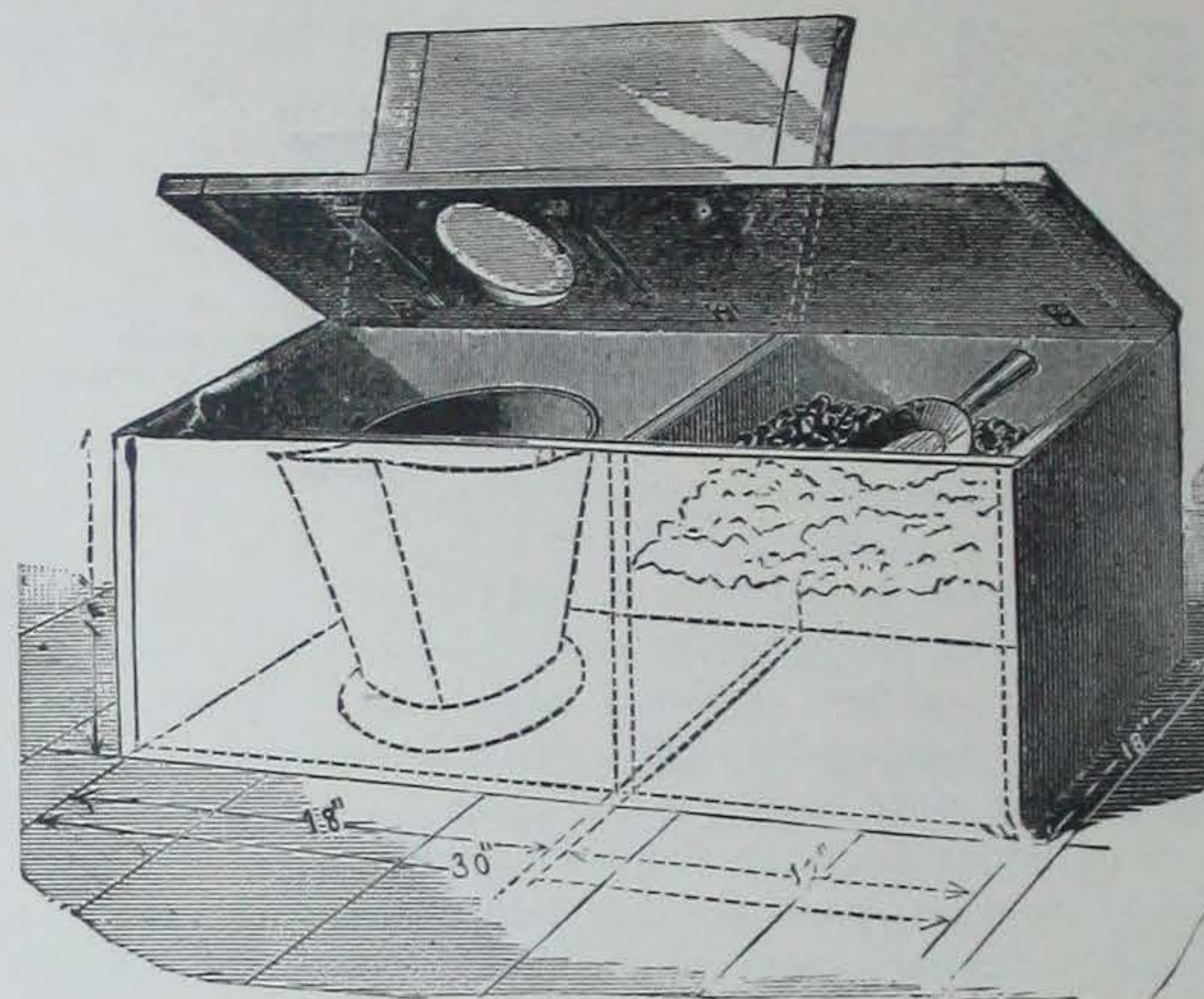


Fig. 4.

have two covers. The lower cover, hinged to the upper edge of the back, extends all the way across both compartments. In this is cut the seat, of usual pattern, over the centre of the larger compartment. The upper cover is hinged to the lower one, and may be raised independently. It is made the size of the larger compartment only, both covers having a little overhanging to facilitate lifting them. The material in, and work on, such a box will cost anywhere from two to three dollars, according to the amount of finish put on it by the carpenter. The receiving vessel is a galvanized iron coal hod as large as will stand in the larger compartment with the covers down. The smaller compartment is filled with dry earth, ashes, peat dust, or whatever else is used as deodorizer, and a little hand shovel or scoop is laid in. The closet is then ready for use, which should be preceded by throwing into the coal hod as much of the dry material as is needed to cover its bottom one inch deep. When used the upper cover is raised, exposing the seat. After use the lower cover is also raised, uncovering both compartments. A small quantity of the dry material is then taken in the scoop and sprinkled over the contents of the hod. A quart is usually more than sufficient. This operation is repeated whenever the closet is used, until the hod is full, when, of course, it must be emptied. Its contents will turn out as a solid mass, inoffensive to sight and smell. Even the most fastidious person, with strength enough to carry the full hod out of doors, would make no objection to emptying it. Occasionally, it is well to air and sun the hod after emptying. I have never known one to require other cleansing. It is better not to use an earth closet as an urinal, but so much of such use as is incidental to its employment as a stool in no respect interferes with its satisfactory workings. In my own house I have placed no restrictions whatever upon its use for any purpose for which any one with sense would consider it adapted. The best material for use in an earth closet is the fine siftings of anthracite coal ashes. Ashes from bituminous coal are not adapted to the purpose. Dry, loamy earth, or leaf mold will answer very well, but it is troublesome to dry and store it. It cannot be had dry enough out of doors, even in midsummer. Sand is useless.

Discreetly and decently used, an earth closet gives very little trouble. If ashes are thrown in after each use, it will not require any attention until the receiving vessel is full. After an absence of about three weeks, during the hottest part of the summer, I returned home to find, notwithstanding the fact that the earth closet had been locked up in a close room, not a trace of disagreeable odor could be detected. The object of leaving the larger compartment bottomless is to facilitate cleaning. More or less ashes will be spilled around the hod, and this should be swept out frequently. By raising one end of the box, the floor under it can be swept much cleaner than the bottom of a box could be without turning it over.

THE HABITATIONS OF MAN IN ALL AGES

By VIOLLET-LE-DUC

Translated by BENJ. BUCKNALL, Architect

CHAPTER XVI

THE IONIANS OF ASIA, THE CARIANS AND LYCIANS

THE countries inhabited by the people known as Ionians, on the western shores of Asia opposite the Peloponnesus, were rich and fertile, their mountain slopes at that time being covered with forests. Wood and stones suitable for building were in abundance. We find ourselves in a far different scene from that of the great alluvial plains of Assyria; we behold a country broken up by mountains and furrowed by water-courses, and whose deeply indented shores presented bays and gulfs peculiarly suited for the concealment of piratical vessels. The island of Rhodes, on the south, was the first of a series of isles which opposed a kind of dyke, cut by passes, to the expeditions of invaders from the west.

Most of these islands, commencing with the largest,—Rhodes,—were occupied by Ionian colonies. A geographical position so favorable to agriculture, commerce, and even piracy, with a fine climate, had afforded the Ionians an opportunity of rapidly developing their natural endowments; they were therefore becoming wealthy and powerful.

As Epergos had correctly presaged, the mingling of the two races—Aryan and Semitic—was rapidly producing an exceptionally energetic development of the arts; and where the Aryan branch was relatively vigorous, the arts, instead of resting stationary as in Egypt, and even in the lands of Assyria, were in a state of continual progress and transformation. Now these Ionians had preserved the timber-framed construction of Aryan traditions, and had adopted from the Tyrrhenian Semites the method of building with blocks of stone. In employing these two methods simultaneously, however, they did not mix them; in fact they only placed them, as it were, in juxtaposition. From this procedure there resulted a very singular and incongruous style of art, but whose consequences had a value the importance of which we shall soon be able to appreciate.

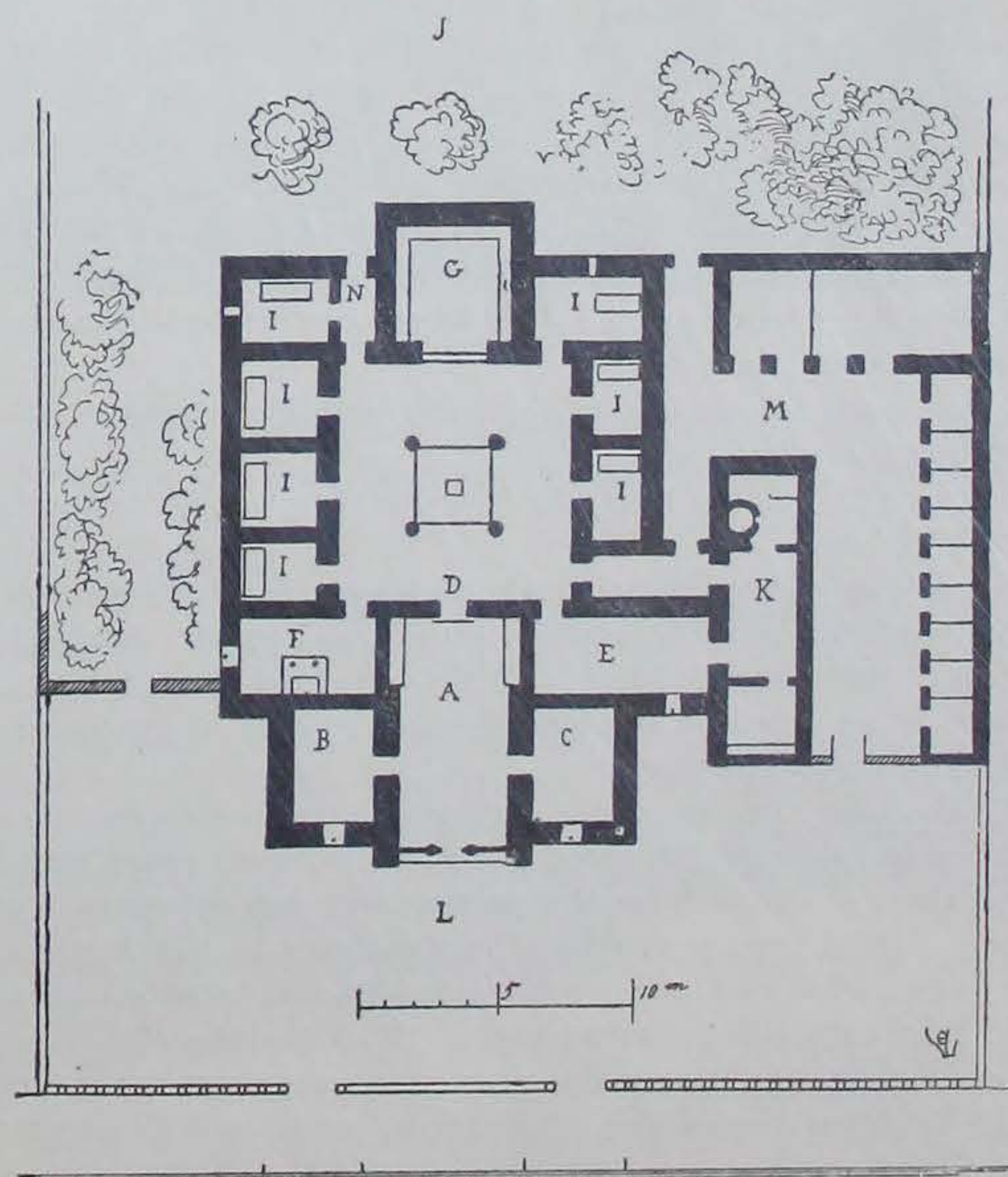
In the plans of their habitations, also, the Ionians exhibited the results of Aryan traditions combined with Semitic influences.

This is shown in figure 59. Here the dwelling is divided into two distinct parts; the one devoted to relations with the external world, and the other to that interior life which is concealed from view. At *a* is a kind of entrance-hall relatively large, opening immediately from without, and intended for the reception of persons calling on business.

This hall communicates right and left with two rooms *b*, *c*; one intended for the business of the proprietor,—for every Ionian devotes

himself to trade of some kind;—the other for the lodging of the employés—servants or slaves who have to do with people out-of-doors. The hall *a* communicates with the interior court only by a single door *d* which is not passed by strangers to the family, unless admitted by the master.

This door *d* opens into a court surrounded by porticos supported by four columns. At *e* is the room intended for provisions of every



PLAN OF IONIAN HOUSE.—FIG. 59

kind, and which is entered only from the portico; at *f* the room in which the archives are deposited, and where stands the altar of the gods. At *g* is the place where the family assemble, as in the Semitic habitation (figures 45, 46). It is in this hall, widely open to the portico, that the meals are taken; and here the women and children pass the day.

From the two sides of the portico at *i* open the bed-chambers

At *k* we have the kitchen with its offices, directly communicating with the portico and the court *m*.

This habitation is situated on the side of a hill, and in front is a platform *l* with a low enclosure. At *m* are the servants' quarters and cattle sheds, with a special court opening on the platform, and the gardens *j* to which the inhabitants of the house have immediate access by the passage *n*.

Figure 60 gives a view of the front of this habitation, whose walls are built of stone irregularly shaped or laid, but close-jointed, without mortar, and whose window-openings, doorways, roofs, porticos, and ceilings are of wood, and the roof-covering of tiles.



EXTERIOR VIEW OF IONIAN HOUSE.—FIG. 60.

All the parts of the building made of wood are painted in lively colors, among which yellow, red and white predominate. In the sunshine these colors lose their crudeness, and harmonize in the most agreeable manner.

"Here," said Epergos to his companion, as they were passing in front of this dwelling, which belonged to a wealthy merchant, "is a beautiful residence, which in no way resembles what we saw on former occasions among the yellow race, on the Upper Indus, in Media, Assyria, or in Egypt. It is worth our while to examine this structure in detail; is it not?"

"If you want my candid opinion, this building seems to me not a little incongruous."

"Let us not be in a hurry to judge before we have examined it particularly."

"The houses of my Egyptian friends appear to me in every respect the most sensible. Why this profusion of detail on the outside? Are houses built for those who live in them, or for the passers by? In all this there is an attempt at display which makes me suppose these people more vain than wise."

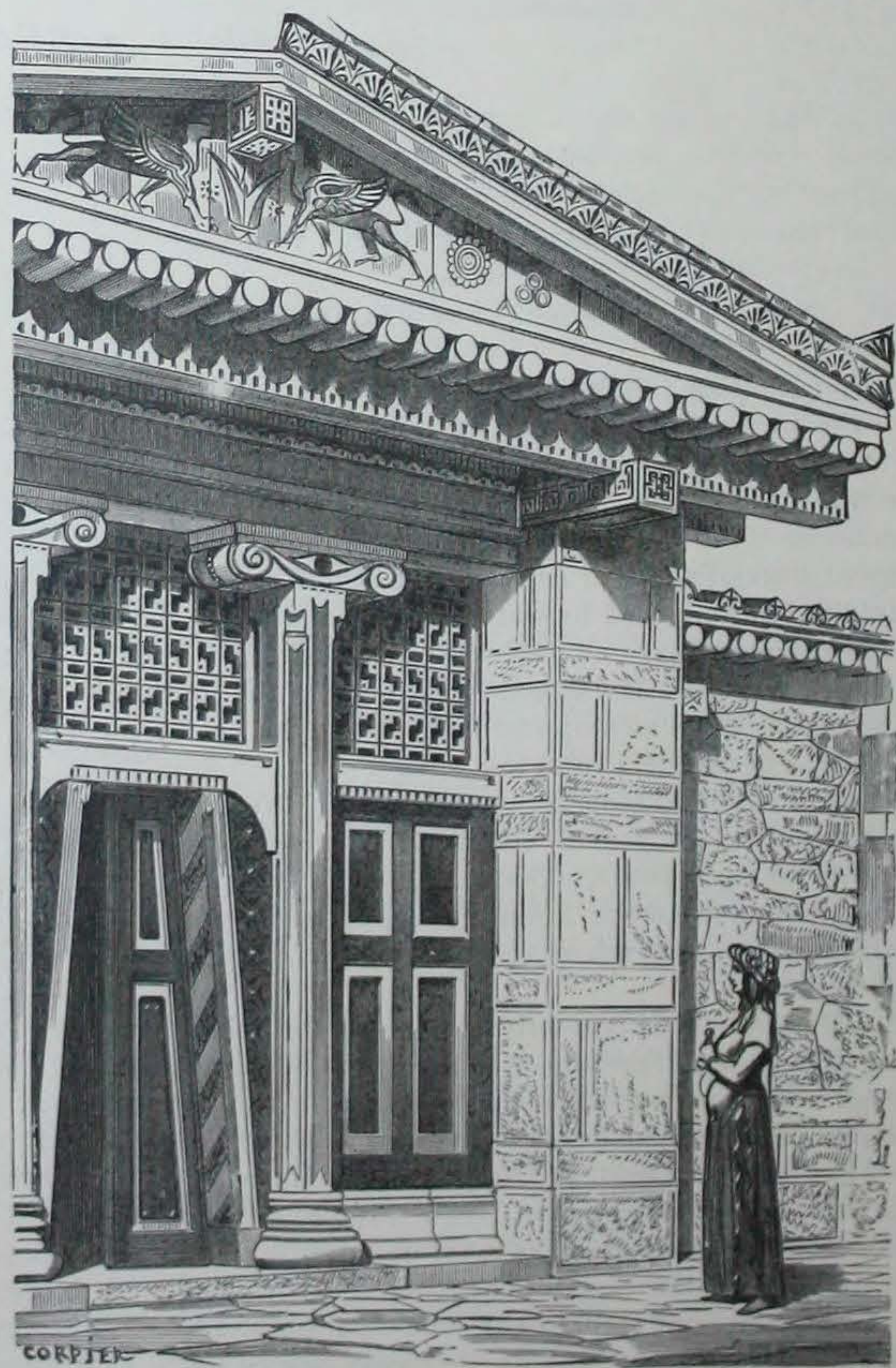
"We shall see: but thou wilt perceive that the entrance only of the habitation is specially decorated; the rest exhibits great simplicity. Perhaps there is a reason for the particularly rich appearance of this entrance. Dost thou remember the dwellings of the Aryas of the Upper Indus, which all possessed a spacious hall intended for assemblies? Might not this be a tradition of those customs?"

Thus discoursing, the companions were approaching the central point of the front (figure 61). "See now," continued Epergos, "how that timber-work is set in between the ends of the two stone walls; how considerable that roof projects beyond the front, so as to shelter the entrance well, and how ingeniously this projection is supported by beams which bear on the ends of the walls. And these two posts with their sculptured and painted caps, their lateral wooden partitions and upper trellis-work, do they not seem well contrived? I recognize here those round wooden joists which we formerly met with in the Aryas of the Indus and among the Medes. But everywhere else the timbers are carefully squared and covered with a thin coating

admirably colored. Then, again, see how well those ends of the walls are built, with low, wide stones interposed between pieces placed on end. These men seem to me to know what they are about, and to do nothing without good reason."

"We had, indeed, the opportunity while passing along their coasts, of seeing that they do not neglect their own interests, are proficient in piracy, and can drive sharp bargains when they are not engaged in plundering their neighbors. Oh, they are clever enough! It is not surprising that with the profits they make, and the plunder they get, they should build sumptuous dwellings."

At this moment the owner of the house was just returning home, accompanied by several servants. He was a young man; his face, framed in a short black beard carefully cleared around the mouth, had an expression at once genial and sensual. The nose, narrow and of good profile, followed the line of the forehead: and his eyes, slightly turned up at the outer extremities, were surmounted by delicate eyebrows regularly arched, as if they had been drawn with a pencil. His hair of ebony black, silky, abundant, and parted on his forehead, fell behind his shoulders. A white pointed cap, slightly curved back in front and embroidered all over with gold thread, left the ears visible. A tunic fitting tight round the waist, with short sleeves, quite covered with embroidered figures, left the neck bare; while over his broad shoulders was thrown a kind of scarf. His legs were



ENTRANCE OF IONIAN HOUSE.—FIG. 61

covered with leggings of fine white stuff plaited in little folds, and his feet enclosed in shoes of bright red, laced, and with pointed toes slightly turned up. As he passed, he gave a side-look at the companions, and said something in an undertone to one of his servants. The latter approached Epergos and Doxius, and asked them if they were foreigners, and whether they had any communication to make to the proprietor of the dwelling. Epergos having replied in the affirmative, the servants admitted them into the entrance hall.

This hall was wainscoted throughout, and covered with a panelled ceiling richly painted. Penetrating through the lattice-work of the

entrance, a subdued and tranquil light diffused itself in the interior. Mats were spread around on a very low, wide bench; and the pavement, entirely composed of small polished stones of divers shades, reflected the vivid coloring of the wainscot.

Epergos and Doxius had not been in the hall many minutes, when the master of the house joined them. "What news do you bring?" said he. "We have seen the eastern countries, and the high lands peopled by savage tribes who have no intercourse with the other nations. We have traversed Media, which is impatient under the yoke of the Assyrians. To the north of Media, along the Caspian Sea, tribes are continually passing on their way westwards, to form settlements as far as the Euxine. These men are vigorous and poor, daring and intrepid; and they burn with the desire of occupying the fertile domains of the prosperous Ninevites. They are following the line of the Anti-Taurus mountains, and are descending into the plains to the west of that chain. . ."

"Well! how does that concern me, I pray?"

"It does so, inasmuch as this stream, ever flowing westward along the same course, will ultimately reach the coasts which you inhabit."

"Have we not towns in strong positions and well fortified, to which we can retreat, and whence we shall be able to descend and crush them?"

"You have what is still better—superior weapons, war chariots, and the science of warfare; but you are wealthy and prosperous, and these barbarians covet possessions which they have not. As long as they inhabit their mountains, with no means of subsistence but the products of the chase, and have not come into contact with nations accustomed to the luxuries of a refined existence, they remain tranquil; but the moment they get a glimpse of the benefits which accompany civilization, they spread like torrents, overthrowing everything in their course, and fearing neither privations nor death. Leaving nothing behind them and having nothing to lose, they are seen rushing in numerous and half-starved hordes upon the fertile plains; eager to defend the possessions they have conquered, when they have once set foot upon a territory that pleases them, they never quit it again."

"Are they still far from us?"

"Certainly! And many years will elapse before they reach so far as your prosperous countries, for they have enough to occupy them for a long while."

"If that is the case, we need not be uneasy."

And having sent for wine and cakes, the master invited the guests to take some refreshments, and then said: "Are you not traders? are you not come to this country to buy and sell?"

"No," replied Epergos; "our object is to become acquainted with the nations; to make inquiries respecting their occupations and arts; that is why we stopped in front of your dwelling, which appeared more beautiful and better arranged than any other."

"It was I who had it built, my father having bequeathed me great wealth. He lived in a small wooden house,—a very old one, but which he was unwilling to quit. Now-a-days we have Tyrrhenian workmen, very skilful in working stone, and who hire their labor to people rich enough to employ them; we therefore make use, as you see, of stones to raise the walls, and so enclose the wooden buildings to which we are accustomed, in a massive stone structure, as a protection from heat and stormy weather. If you like to visit the other parts of the house, since you are curious about our arts, there is nothing to prevent you from seeing the apartments which I think proper to show to persons of discretion, and you shall be shown through them. But tell me, have you heard any news of the fleet of galleys which we sent into the western seas?"

"None; for we do not come from that quarter."

"Bad news has been brought to the country by some fishermen; but nothing certain."

The proprietor having bidden a slave to go and acquaint the women of the presence of strangers, Epergos and Doxius were admitted into the court surrounded by a portico (figure 62).

In the middle of the area left open to the sky was a small fountain, whose waters poured into a basin, and into channels which conveyed them by conduits into the garden. The portico, constructed entirely of wood, was painted, like the front, in vivid colors. The rain-water, discharged from the roofs, fell into the middle of the court. Opening into the court at the further end was the room where the family

assembled,—raised two steps above the pavement of the portico. Around this room were seats, very low and wide, covered with rich stuffs. It was on these seats that persons reclined to take their meals, which were served on small tables placed before each guest. Above these seats of wood inlaid with ivory and silver, was a wainscot, also covered with inlays very beautifully executed. This room was lighted only by the open part of the court; and this reflected light gave a brilliancy to the vivid colors of the ceiling, the walls and the wainscoting. Epergos asked the proprietor many questions, to which he replied apathetically, and without appearing much flattered by the admiration expressed by his guest.

"I see," he said at last, "that you take a lively interest in these matters of art; I will send for Eudexion, who will reply to all your questions better than I could; when you are weary of interrogating him you shall come and see the gardens." On this he beckoned to a slave, and told him to go immediately in search of the architect; then with a friendly gesture to the visitors, he went in the direction of the gardens.



INTERIOR OF IONIAN HOUSE.—FIG. 62

Left alone with Doxius, Epergos said: "Dost thou remember the habitations of old Vâmadêva (figure 18) which we visited many centuries ago?"

"Why this question?"

"Because I find a certain relationship between this building and those houses of the ancient Aryas."

"A merely fortuitous resemblance."

"By no means: there is nothing fortuitous in this world; everything has a cause. The house of the old Vâmadêva had, like this, its large anterior hall, its court with surrounding shelter, its place set apart for the altar of the gods and valuable treasures, and its bedrooms round the portico."

"We have seen halls and porticos everywhere—and sleeping rooms everywhere."

"Certainly: but what we saw in Egypt and in Assyria had no resemblance with what we see here. This timber framing, these wooden posts, the arrangement of these joists, these doors narrowed at the top,—even the general distribution of the apartments,—everything, in fact, though with greatly improved means of execution, reminds one of Vâmadêva's house, and not at all of the palaces of the Egyptian monarch and of the Assyrian king."

"Well?"

"Well! I should conclude from this similarity to the one, and want of resemblance to the others, that the Ionian peoples belong to a branch of the Aryas that has preserved, almost intact, the Aryan traditions."

"If, as thou maintainest, there are races of men, each possessing special aptitudes, how should these tribes, so far removed from the Upper Indus, have preserved those traditions more faithfully than those nearer to the plateaus of Central Asia?"

"The Medes and the Assyrians are certainly less distant from those plateaus than are the Ionians; and thou assertest that the Assyrian dwellings differ essentially from the habitations of those ancient Aryas."

"The Medes, and especially the Assyrians, long established in the territory which they occupy, may have come under influences from the peoples who previously inhabited those regions, and with whom they intermixed; these on the other hand journeyed very much further, but not having halted on their route, might have brought their ancient traditions as far as these shores where they have settled down."

"Perhaps at this day, among the numerous emigrants who continue travelling westwards, following the shores of the Caspian and Euxine, there are some destined to carry those early traditions still further away from their point of departure."

"I do not see the least resemblance between these Ionians, with their slightly coppery skin, black hair and eyes, and the fair-haired Aryas; so that the hallucination which leads thee to believe in different races of men, will bring thee here into contradiction with thy theory."

"Not so fast: I have already noticed in this country women with very white skin and fawn-colored hair; and purity of blood is better preserved in women than in men."

"Ah! that is another of thy fancies."

"Yes, the result of my observations."

"But what is the drift of all this?"

"It is that I find among these populations which are akin to the Aryan stock, when they have been merged in too powerful a current of another race, elements of progress which charm me and fill me with hope; whereas, if I visit an Egyptian or even an Assyrian dwelling, I may retain a profound impression of admiration, but nothing seems to remain to be attempted, nothing to be added, nothing to be modified."

"Which is nothing more nor less than saying, that things which are perfect charm thee less than those which might become so?"

"Exactly."

"See how ingeniously the timbers of this framing are arranged," resumed Epergos; "but observe, also, how these combinations stimulate one to seek new ones, still more ingenious."

"Is this work perfect, however? No; it has not the simple majesty of Egyptian art, nor the sturdy strength and indestructible aspect of the Assyrian buildings, but it *speaks*; one feels that here every workman must have contributed his share of intelligence, and has left the imprint of his labor. We do not behold here, as in Assyria, the effort of beings in vast numbers acting mechanically under the master's rod, and piling up materials without knowing what the result will be. Here each one must have worked with the consciousness of a motive for his labor, and in view of the final result. Dost thou not appreciate this view?"

"I cannot share an opinion which appears to me dangerous, however seductive. I deem wise not him who is continually seeking, but him who having found the good, is concerned only how to preserve it."

"But if thy opinion had been accepted ever since men have been upon the earth, the whole human race would be living scarcely sheltered under trees, and would be feeding on roots and reptiles; for just now thou wert reproaching me for having in the earliest ages taught a few savages the art of building themselves huts."

"Mischievous was already done; but the wise should know how to stop on an incline which is leading to the abyss of confusion. I like the Egyptians, because they were able to halt after having reached a wonderful degree of civilization."

"What is progress, if it is not the seeking for a good? What is wisdom, if it is not the keeping of this good, and preserving it from every attack? What thou callest progress, is a restless advance; my idea of progress . . . (but I do not like the word—it does not express my notion) my view is, then, that when the steps that lead to the summit have been ascended, it is advisable to stop at that summit; otherwise there must be a going down again!"

"Yes: better go down again to reach a summit farther off and still

higher, than halt; for to halt is to die, and though man is destined to repose in death, such is not the destiny of humanity."

At this point the discussion was broken off by the entrance of the architect Eudexion.

"We were admiring the residence thou hast built for that wealthy personage, whom the gods protect. He has been kind enough to send for thee to gratify our curiosity; for everything here is new to us," said Epergos. "Wilt thou please to enlighten us?"

"This habitation," answered Eudexion, "resembles many others, and I do not claim to have done anything more than conform to the customs of Ionia."

"That may be; but we have nowhere else observed this art of framing timber; whence did you derive it?"

"Formerly, as our elders relate, there being a great abundance of timber in the country, our fathers constructed dwellings entirely composed of trunks of trees. But our neighbors, the Tyrrhenians, built and still build their dwellings with large stones, which they skilfully joint and work. The employment of these solid and durable materials has been gradually adopted by us; nevertheless the custom of living in timber houses was too general among the Ionians to allow of its being abandoned. We have therefore amalgamated the two systems, and ceasing to treat timber except as material which had to be left in contact with the inhabitants, we have incased this structure with stone, of which the walls and the most solid parts are composed. That is why you see our walls covered on the inside with wooden panelling. Columns, linings, and window frames of wood, such as these, were all roughly executed a century or so ago; but now we have skilful workmen. First the unhewn posts were squared; then the angles were taken off, and in this way these many-sided columns came to be fashioned. The rude caps which were placed on the top of these posts, to relieve the bearing of the beams, were carved at the ends in volutes. The whole has been covered, as you see, with painting, which beautifies and preserves it. As regards the roofs and ceilings, we continue to make them of wood; though giving them a more and more elegant appearance, as the taste of each may suggest, and enriching them with painting and even gilding."

"To prevent these wooden columns from being affected at their lower extremity by the dampness of the soil, we place them on stone bases. In short, these new buildings are like those much older ones which you may still see in the country, and affect nothing more than to reproduce the older arrangements with more elegance and studied refinement in the execution of the details. We have the art of working tin, copper, silver and gold, and giving to these metals all the forms which the workmen choose to adopt: you will observe how the woodwork and furniture have been enriched with delicate ornamentation in metal. It is, moreover, not very long since we began to overlay the rough walls with plaster. We derived this art from the countries of the East, where they burn stone to make lime, which, mixed with sand, enables us to get the smooth surfaces so well adapted for painting on. We even apply a very light coating of this lime, ground up with the fine dust of hard stone or fine sand, upon our timberwork, to preserve it from the action of the sun, and as a surface for painting; but this requires great care."

"And what wood do you employ thus?"

"Cedar, cypress, and sycamore; these kinds of wood are beginning to become rarer, and already some wealthy persons have had columns cut in blocks of stone, exactly adhering to the form of those made of wood. The day will come when the cappings also will be cut in stone; there is nothing to prevent this; but they must be less projecting, to avoid their breaking under the superimposed weight, for stone has not the flexibility of wood. Would you like to inspect one of the bedchambers, while the family are in the garden?"

"With pleasure."

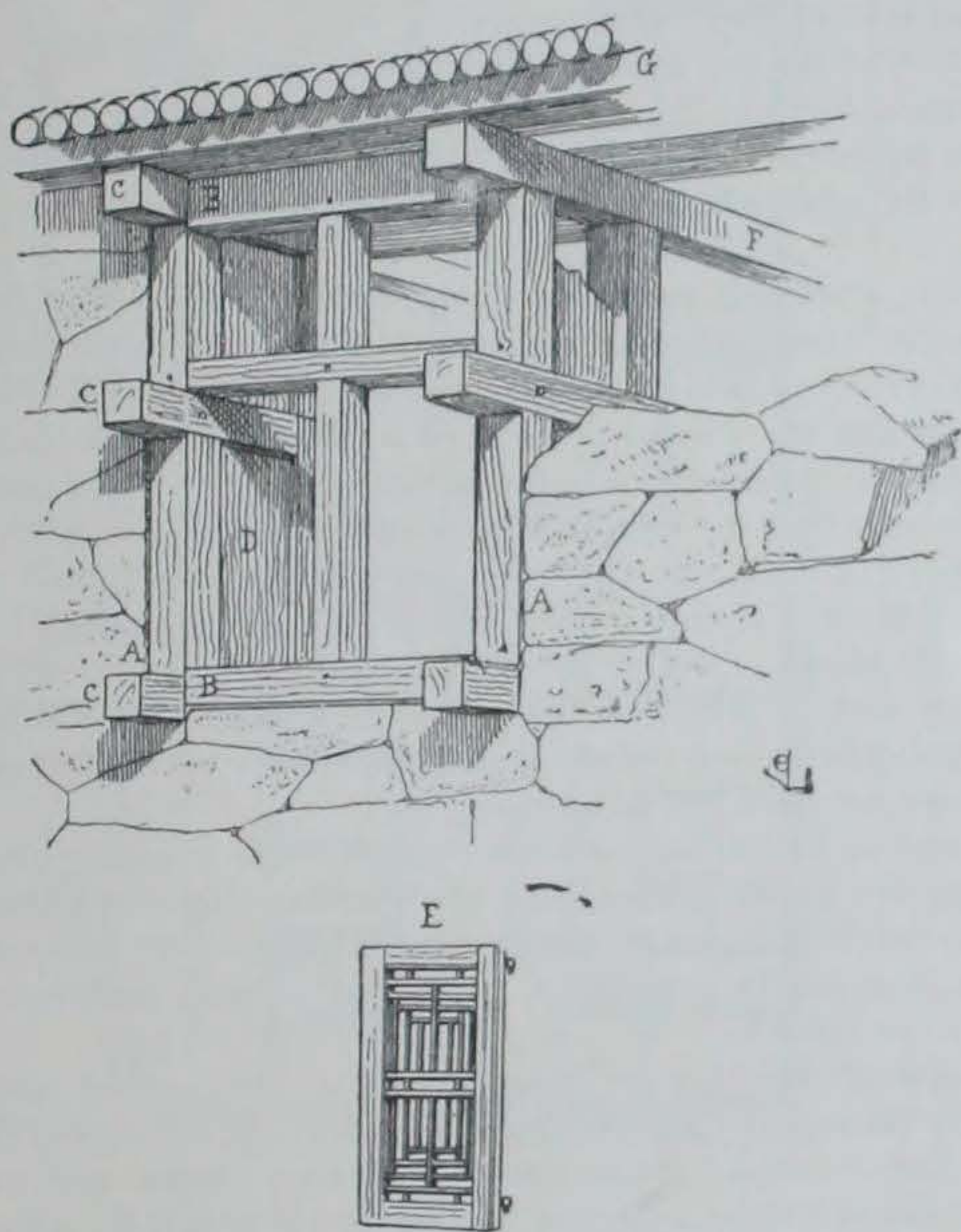
"You observe that these chambers, which are small, receive light only by the doorway opening under the portico. This doorway is closed by a wooden leaf and a curtain; the door may therefore be left open at night to admit fresh air. Each of these chambers has a ceiling of colored wood; the walls have their upper parts painted, and are wainscoted below with costly wood. A bedstead, likewise of wood inlaid with ivory, occupies the further end of the chamber. At the side is a small table and a stool. The floor is covered with mats very finely worked, and a lamp is placed on a bronze support."

"Contact with stone is manifestly avoided everywhere."

"Certainly; and this, as I was observing, results from the long-continued habit of living among dwellings made of wood. Besides, in this country, contact with stone is insalubrious, and occasions pains in the limbs."

"To show you how careful we are in this respect, observe those windows which light the two entrance-halls of the outer front. Examine (fig. 63) how these openings are constructed."

"The window forms a box-frame built into the opening, and consists of two uprights A, two cross-pieces B, and on either side three tie-pieces C, which constitute the thickness of the stone wall, and are framed into other uprights on the inside."



WINDOW OF IONIAN HOUSE.—FIG. 63

"The interspaces D are filled by wooden panels, as well as the soffit and the sill. A cross-frame divides the window into four parts, in each of which is hinged a latticed sash E. Thus the hand never comes in contact with the stone. These window-frames have the additional advantage of keeping up the irregular masonry which surrounds them. The pieces F form ceiling beams projecting outside and carrying the plate G, which receives the rafters of the roof—simple round poles upon which are nailed the planks covered with tiles that compose the roofing. These tiles are glazed by fire to make the rain water run off more readily, and to prevent the dust from remaining on them. The roofings thus formed presenting clear and brilliant colors, and shining in the sun like gold or silver, are pleasant to the sight, and prevent the heat from penetrating as it would if the tiles were unglazed."

"I see that every arrangement has been made to render these dwellings agreeable and healthy. Do they never build in this country with unburnt brick or clay as in Assyria and Egypt?"

"No, never; because we have violent rains that last some weeks, and the ground is often shaken by earthquakes."

"Our timber constructions surrounded by stone are proof against these shocks, and prevent the damp from penetrating into the interior."

"You will understand that these coffers of wood and beams support the walls, and prevent them from disuniting. Look how securely the portal is supported by this timber screen. The two ends of the walls cannot stir, strongly stayed as they are, and kept in place everywhere. Formerly walls of unburnt brick were built in our country as among the Medes, but they were soon injured by the damp, and fell to pieces at the least agitation of the ground."

"But if timber should fail, could you not employ stone, not only for your columns and points of support, but also for lintels and cornices?"

"Probably; hitherto we have not been obliged to do so; moreover, as I said before, we prefer to avoid contact with stone in our dwellings, and we shall always be obliged, in conformity with local usage, to line the interior subbases, at least with wood."

At this point in the conversation, the master of the house joined the three interlocutors, and asked them to go into the garden. Shaded by the glossy foliage of lemon-trees, and reclining on a carpet spread over a very light brown couch, was the mistress of the house, surrounded by three little boys. A female slave of the Semitic race was waving a large fan of palm-leaves over the head of her mistress; while another woman, seated at her feet, was singing to amuse the children, who were listening attentively.

A rivulet, clear as crystal, was rippling along a channel hollowed out of the trunk of a tree, and, separating into small irrigation trenches, was lost amid the grass and flowers. The mistress was attired in a long white robe, embroidered in brilliant colors, slit on both sides and falling in numerous delicate folds. A closely-fitting corsage enveloped the bust, reaching as far as the hip; the neck was bare, and was adorned with a wide, rich, gold collar, which fell crescent-wise over the breast. Her hair, of a dark fawn color, fell over her shoulders in long and luxuriant tresses, and a coiffure of transparent tissue, in which gold threads were interwoven, surrounded her head. Bracelets of gold encircled her bare arms. On seeing Eudexion and the visitors approach, she smiled courteously; then addressing the architect, she said to him in a tone of indifference: "Hast thou not visited the treasurer's house?"

"It is large and beautiful, adorned with stone columns, covered with finely-wrought sculpture, and many ornaments from various quarters; you see Median vases, Tyrrhenian bronzes, Egyptian statues, and Assyrian carpets, and light, transparent hangings placed over the area of the court."

"Is it not shameful to make such a display of luxury, when one is entrusted with the public money?"

"These articles are presents from the merchants in consideration of a remission of duties. It is a mere tasteless accumulation; and I prefer this house, where everything is in the place suited for it, to that one, filled though it is with rare and costly objects."

"Yes; because you built this yourself?" "No; but because it has been arranged by a mistress of refined taste, and who can appreciate things at their right value."

The lady smiled at this compliment and addressing the visitors said: "What do you think of Ionia,—you who come from such remote parts, and have visited so many countries?" "It seems to us," Epergos hastened to reply, "that it is the most beautiful country in the world, and inhabited by the most amiable and polished of nations."

"Thou flatterest me; but never mind, for flattery is sweet when it is addressed to the country one loves." "And which is the envy of so many enemies," replied the master; "for while we have to struggle with the Pelasgi, these strangers announce an invasion of barbarians from the northeastern mountains." "Indeed," responded his wife "Oh!" said Epergos, "you need not be anxious; the Ionians will not have to fight these barbarians until your children themselves shall have left the earth."

The lady became pensive. A murmur of voices was heard without, and a slave came and whispered some words in the ear of his master, who immediately directed his steps towards the entrance of the house. "What is the matter, then?" said the beautiful Ionian addressing her women. "Some people on business," replied the singer. Evidently disquieted, the mistress of the house arose. Her husband, pale and tottering, was re-entering the garden. To the questioning looks of his wife his only reply was: "The priests of Poseidon . . . the fleet does not return . . . victims are wanted to appease the god."

"Ah! and what victims?"

"Ten children of noble birth."

"And . . . they are asking for thine? . . ."

"For one!"

"Why not for all three!" said the mother, now rousing herself like a lioness, and with an instinctive movement enveloping her children in her long robe.

Overwhelmed with sorrow, his eyes fixed on the ground, and his

arms falling forwards, the master seemed incapable of a suggestion or a reply. "And . . . thou hast told these priests," continued his wife, "that thy child was here,—that thou wouldst give him up to them,—is it not so? thou hast said that? . . . But answer then! . . . which of the three didst thou point out? . . . Say! . . . Must I not decorate him for sacrifice? Which? Which?"

"I could say nothing—I could not answer . . . the priests are waiting."

"Well! choose then!" and with a hasty movement she pushed forward her children, who fell at their father's feet, uttering cries of terror and grief. But immediately throwing herself on these three little creatures, taking them up in her bare arms, and pressing them to her bosom in a stifling embrace, she added: "Go and tell the priests of Poseidon that they may come and take their victims,—they shall have four for the one they ask."

The master seemed to look upon the scene as if he were a stranger; his apathy and the vague expression of his features contrasted with the violent gestures and the infuriated looks of the mistress. . . . Epergos and Doxius, at some distance off, were inquiring of the slave the cause of the trouble that had so suddenly befallen this family, so tranquil a few moments before. "If the gods will have it so!" said Doxius. Epergos shrugged his shoulders and clenched his fists. Outside the murmur was increasing. "Come!" said the master, as if waking up from a heavy slumber, "we must have done with it!" And going towards his wife with his eyes closed, he took at hazard the arm of one of his children. She let the poor little creature go, and seeming calmed all at once, followed her husband. Arrived at the garden-gate, she placed herself before him, and then, shrieking, seized the child once more. "No!" said she, "not Doricmes; take one of the two others!" . . .

"The gods have decided it."

"Not Doricmes; it shall not be Doricmes!"

"Silence, woman; the gods have decided it."

"Well! take him then; and woe be to thee!"

And while the father was entering the passage which conducted to the court, the mother, with disheveled hair and furious mien, returned to her two children who had remained in the hands of the women, snatched them hastily away, and regained the house.

Next day this beautiful dwelling was a heap of cinders. Maddened by grief, and accusing the gods, their priests, and her husband, the wretched mother, after having suffocated with her own hand the two children that remained to her, laid them in their little beds, heaped around them their playthings, their clothes, and all that belonged to them, and set fire to this pyre of souvenirs. . . .

On its smoking ruins the master was received by a fury with the reiterated exclamation: "Doricmes will have had a splendid funeral!"



Asiatic Ionian

CHAPTER XVII

THE HELLENES

THE surge of Aryan emigration was rolling ever westwards, and numerous tribes belonging to this race had established themselves on the plateaus of Thessaly, Epirus, and Thrace.

Energetic, hardy, and intrepid, they took possession of the countries already occupied by the Pelasgi, became mingled with the latter,

and occupied, under the name of Hellenes, the countries situated between Thessaly and Peloponnesus, part of the islands of the Archipelago, and even some districts of Asia Minor.

Divided into four great branches, the Hellenes comprised the Achæans, the Æolians, the Dorians, and the European Ionians.

Arts, commerce, manufactures, and agriculture soon attained a most extraordinary development among these active and warlike peoples, when they had settled in those regions—so favorable to the increase of wealth of all kinds—which had been previously occupied by the Pelasgi. Among the cities which rose on the Hellenic soil, Athens acquired a marked preponderance from the importance of its marine, its commerce, and the singular aptitude of its inhabitants for works of skill of every description.

Destroyed by the Persians, it speedily rose again from its ruins more beautiful and glorious than before. Around its Acropolis covered by sacred buildings, the city extended far and wide, with its temples, its public places and edifices, and its houses intermingled with verdure.

No city displayed greater activity; for any one coming from Asia it seemed as if in entering Athens he was coming into an ants' nest. Possessing, at the epoch of its greatest power, the three ports of Munychia, Phalerum and the Piræus, it covered a district whose circumference measured two hundred stadia (twenty-four miles). But it was around the Acropolis that the houses were crowded together and the population always in activity. There wagons were passing to and fro filled with merchandise from the ports or conveying it thither. The streets and public places in which people passed their lives presented a busy and noisy scene. Strangers, who came to buy or to sell, were continually entering or leaving the shops and places of manufacture, and slaves were carrying messages or burdens.

Women as well as men were to be seen in the streets, going to the markets, the public games, and the meetings of corporate bodies. From the earliest hours of the day large numbers of peasants might be seen bringing in vegetables, fruit, and poultry, and crying their wares in the streets.

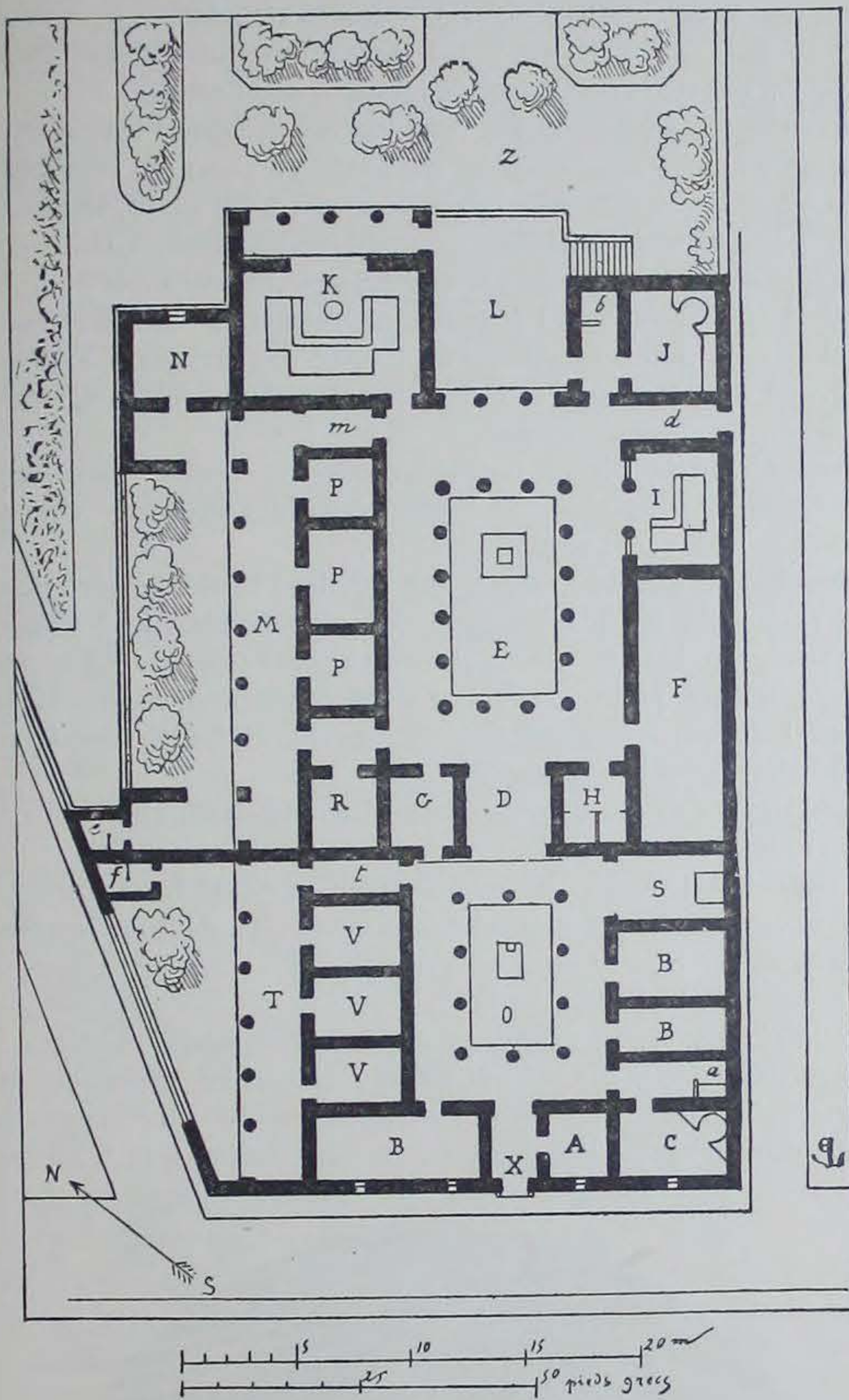
Houses of the higher class occupied the second zone; they generally possessed a garden and sometimes outbuildings of considerable extent. Around them were to be seen clients and parasites, waiting for the hour when the master should make his appearance; and whiling away the time in discussing the news of the day, repeating the rumors, true or false, that were current in the city; getting the slaves to talk, and laughing among themselves at the strangers that happened to be passing, or addressing them with a view to make fun of their accent, garb or dress.

The house of Chremylus, recently built in that second zone, was a subject of remark for all the idlers. Chremylus, who had lately become wealthy by means of commerce, and of certain transactions of a more or less creditable character in the colonies, was an object of envy and criticism to most people, and of admiration for some who did justice to his intelligence and energy. He enjoyed a certain degree of influence in the public assemblies—thanks to his liberality; while he took care to secure the good graces of the archons and to enrich the temples.

We have (figure 64) the ground-plan of the residence of this Athenian citizen. The entrance *x* opens on the public road. The site is bounded on either side by narrow streets. This entrance *x* opens on the court *o*, which is surrounded by porticos. At *a* is the porter's lodge, and at *b* the rooms for the slaves, with kitchen at *c* and latrines at *a*. From this first court, in the centre of which is a small fountain with a basin which receives the rain water, the passage *d* leads into the inner court *e*, which is larger and is likewise surrounded by porticos. At *g* is the reception-room, at *h* the strong room for valuables, and at *s* the private altar. At *f* is a large store-room containing provisions and wine; and at *i* the small dining-room (*triclinium*); the cooking-room for the family being at *j* with latrines at *b*. The large *triclinium* is at *k*. The passage *m* admits to the *gynæceum*, containing the bedrooms *p* along the portico *m*, a common room for the women, with its small enclosed garden, and closets at *e*. The quarters for visitors are entered by the passage *l*, and consist of bedrooms *v*, a portico *r*, a small garden and closets *f*. At *d* is an opening into the lane for the servants, when required. The gardens extend in the direction *z*.

This house is situated on the slopes of the hill which to the south-west looks toward the Acropolis; thus it is sheltered from the violent winds which sometimes blow from this quarter.

From the large dining-hall and from the terrace L, which adjoins



PLAN OF ATHENIAN HOUSE.—FIG. 64

it, there is a charming prospect; for, above the trees of the garden is seen the city overlooked by the Acropolis, and towards the left the hill of the Areopagus. From this terrace L there is a descent to the garden by about twelve steps. The position was chosen with a view to protection against the sun's heat and the troublesome winds. From the portico of the gynæceum are seen the hills extending towards the north, covered with houses surrounded by olive-trees; and in the background Mount Pentelicus, whose bare and rugged flanks present the changing colors of the opal.

In the dwelling of Chremylus the various departments were arranged at the proprietor's discretion, and the architect only conformed to his instructions. Thus the front part of the house is assigned to the external relations of the owner. In this court o assemble the agents or factors who come to give an account of the commissions they have executed, or to receive orders. If the master wishes to speak to one of them, he takes him into his reception-room; his bedchamber being at R, he can easily repair to that reception-room or to the gynæceum reserved for the women and younger children.

If he entertain friends, they have their separate apartments, which are shut off, not being in communication with the first court except through the passage t. All that part of the habitation which is beyond the wide entrance-hall D is consecrated to domestic life; and only the intimate friends of the family are admitted into the second court; for example, if they are invited to a banquet,—which is held in the great hall K.

The master usually takes his meals with his wife and one or two members of his family who live in the house, in the smaller room I,

the couches of which will hold six persons; whereas fifteen guests can be accommodated on the couches of the great hall K.

Chremylus has spared nothing to render his house one of the most sumptuous in the city. The columns of Pentelican marble support architraves of wood, surmounted by friezes and cornices overlaid with stucco and ornamented with delicate painting. Everywhere the walls are coated with fine smooth plaster, adorned with paintings; and the ceilings are of timber artistically wrought and colored.

Epergos, who on several occasions had sojourned for a considerable time in Hellas (for he liked its people more than any other he had visited), had not a little contributed to the progress of the arts and of manufacturing industry among the Athenians; while Doxius had remained nearly the whole time in Assyria and Egypt. He had witnessed the fall of Nineveh, the war of the Persians with the Assyrians, and the termination of this powerful empire which was subjugated by Cyrus. When Doxius had happened to meet his companion in Hellas, he had not been sparing of his criticisms on all he saw done among its active and striving populations, which were constantly changing their government, and inclined to free themselves from their traditions. He had predicted the ruin of the Hellenes, whom he regarded as unruly children, always citing Egypt and Asia as the sources of all wisdom; though Egypt was visibly declining and the Median empire was crumbling to pieces. So during one of the last visits which Doxius paid to Athens, after its destruction by the army of Xerxes, he was endeavoring to induce Epergos to quit for ever these devastated shores, but Epergos, full of confidence in the genius of his friends the Athenians, set to work again with them to restore the burned city, as he had formerly aided the Aryan to restore his hut thrown down by the tempest. Besides, Epergos liked discussion, and in no other country had he had so many opportunities for it as at Athens.

When the Hellenes began to occupy a large part of Greece, after having subjugated the Pelasgi, they brought with them notions of arts of a very rude character, borrowed from Asia. The Pelasgi, on their part, had made but little progress since the time when they built those massive structures of which we have seen a specimen. (See figures 56, 57, and 58). But the various relations which were soon established by the Hellenes, the Ionians, and the Lycians of the coasts of Asia, gave to the first the notions of art in which they were deficient. They began therefore to build habitations like those of their Asiatic neighbors, while preserving something of Pelasgic customs. Wood suitable for building was however by no means abundant in Greek lands, while there was a profusion of calcareous stone of rare beauty. They began therefore to substitute columns and capitals of stone or marble for those of wood; and were then led to give these capitals a much smaller development than the Ionians gave them, lest they should break under their burden. Their general form was however retained,—that of a capital in wood terminated by volutes; and these capitals retained the name "Ionic." For a long time, however, they contented themselves with this modification induced by the change of the material.

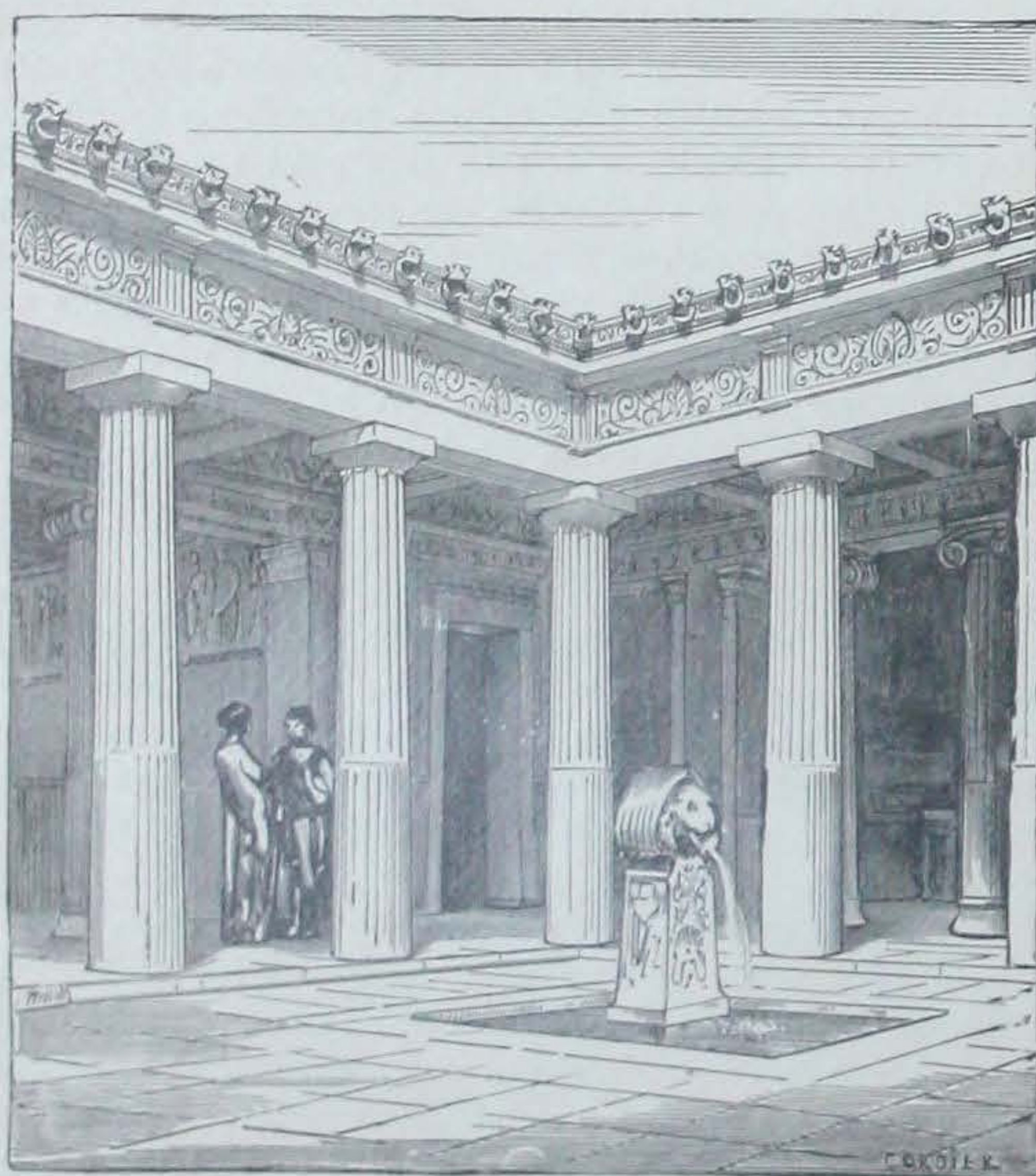
We cannot say whether it was Epergos who first pointed out to the Dorians,—a branch of the Hellenes, as stated above,—the want of relation between the form of this Ionic capital and the material thenceforth employed—namely, calcareous stone. Certain it is, however, that these Dorians, induced by considerations of this nature, abandoned the traditional form of the wooden capitals to adopt a new one springing from the use of stone. There must have been long discussions on this question among the architects of Hellas, though they may not have been preserved: but reason triumphed; the Ionic capital, derived from that of wood, was abandoned, and that which was adopted took the name of "Doric."

This sturdy capital, which projected considerably beyond the shaft of the column in its original form, gradually received a finer profile; and, at the time when Chremylus had his house built, the Doric capital already presented the most delicate outline.

Chremylus had an esteem for Epergos, and had often consulted him while his house was being built: so when it was finished, and he had begun to live in it, he resolved to assemble some of his friends at a banquet within its walls; for the Athenians highly prize the pleasures of the triclinium, when shared with intelligent persons whose conversation is worth hearing.

Chremylus had the art of enlivening his guests; having selected them with care, and set them talking on a subject adapted to excite their enthusiasm, he would, as a man of intelligence, be silent himself, and leave them to the discussion. If the conversation languished, or a loss of temper was impending, he would politely revive it or give a pleasant turn to acrid debate. Any one who was a guest of Chremylus considered himself fortunate, for they were chosen from the most refined society of Athens. And this was not the least of those occasions of jealousy of which the envious made a handle against the wealthy parvenu.

For this inauguration banquet the house had been decorated with care, and the gardens filled with flowers. The guests arrived in the afternoon, elegantly apparelled, and met beneath the first portico. There were ten of them; for Chremylus was of opinion that for the party to be a pleasant one this number should not be exceeded. They were no strangers to each other; and among them were two philosophers of high repute in Athens, a dramatic author, two archons, a celebrated painter, the architect, Epergos and Doxius. It was not the custom at that time for women to be present at banquets. Without keeping his



INTERIOR OF ATHENIAN HOUSE—FIG. 65

guests waiting, Chremylus, when he knew that they were assembled, came to receive them under the first portico, and introduced them into the second court, separated from the first by curtains woven in lively colors. This second court, also surrounded by porticos supported by Doric columns of white marble, more spacious than the first, afforded a view of the gardens and the city above them, through the colonnade at the further end. (See the plan, figure 64). Towards the extremity of the open part of the court was a marble fountain with its basin, diffusing an agreeable freshness (figure 65). The columns, finely fluted two-thirds of the way from the top, were colored red on the lower part, which was less smooth; while the marble of the upper part was slightly tinted with a very pale yellow, enriched with black and white ornamentation under the ovolo of the capital. The architrave, composed of pieces of cedar coupled together, was covered with a plaster coating as thin as an egg shell, and also colored yellow. The frieze was composed of triglyphs over each column—triglyphs which were only the ends of the beams supporting the joists of the ceiling of the porticos; and between them fillings in of thick planks of cedar covered with a delicately painted plaster coating. Next came the projecting cornice, likewise of wood, carrying the gutter made of colored terra cotta, which was pierced with several openings to let the rain water through, and which was surmounted by carved heads of animals. The triglyphs, painted in light blue, contrasted with the tints of the decorations near them, which were in red, black, and white, on a yellow ground.

The brilliancy of the sunlight and the azure of the sky wonderfully harmonized this light and transparent coloring, set off by the red and dark yellow background of the portico walls.

The guests did not fail to congratulate Chremylus and the architect; for they knew that the master of the house had a great esteem for him. "Yes," said Chremylus, "address your compliments to this good Eicos, for I have sometimes made him very angry . . . but he is so expensive! that is my excuse."

After they had admired the paintings of the small triclinium—representing young girls bringing offerings to the god Pan—and the refined beauty of the bronze couches, inlaid with silver, they repaired to the garden which Chremylus had improvised. He had had trenches sunk in the living rock and filled with vegetable soil. There flourished the orange and lemon tree, rose-trees and laurels, and a profusion of aromatic plants. Not only so; at great expense the master had had transplanted thither full-grown olives, fig-trees and plane-trees.

Small channels nicely hollowed out in marble distributed the water in every direction, and slaves were constantly engaged in keeping the walks and shrubs in order.

When the supper was ready, they repaired to the larger triclinium, where each took his place (figure 66). The viands and wines were immediately brought by young slaves, the best to be found in Athens: whilst two flute players, moving backwards and forwards in the gardens before the festive hall, filled the air with melodies now soft and slow, now lively and spirited.

Soon, thanks to the flagons of excellent Lesbian, the conversation became animated.

"I regard Athens as the queen of cities," said Epergos. "What is the magnificence of the Persians with its tedious ceremonial, compared to the liberty enjoyed here?"

"Licence," said Doxius.

"What," said Epergos, to provoke his companion, "are those Egyptian banquets amid which a coffin is carried about—to induce the guests (say the inhabitants of Memphis) to be more eager in the enjoyment of the good things of earth—and during which all the talk



THE LARGE TRICLINIUM,—FIG. 66

is of bags of wheat and flocks of geese, compared with these social gatherings, in which one can scarcely say which is to be preferred, the good cheer or the conversation? Boy! give me some more of that partridge stewed in the lees of old wine—'tis a dish fit for the gods!"

"By Bacchus," said Doxius, "take care of thy wits, Epergos."

"Nonsense, Doxius! my ideas are as clear as this air which allows us to see from this spot the sentinels on the ramparts of the Acropolis."

"But," said he, addressing the architect, "tell us, Eicos, since thou wert in the humor for doing everything in the very best manner, why didst not thou make the entablatures of the porticos under which we were just walking, of marble?"

"Why!" replied Eicos, "Chremylus considered that even in building columns in marble I was spending too much money—in fact, ruining him."

"Yet, in your temples," continued Epergos, "among all the Dorians, you put entablatures of stone upon columns of the same material; and these entablatures do not differ sensibly in appearance from those which thou hast made here of wood. Is it logically consistent to give similar forms to architectural members made of different materials? Among the Medes and in Ionia, I observed that the materials employed dictated the form adopted in the architecture. Understand me; I am not finding fault with thy porticos, which are admirable; but I should be glad to hear what thou hast to say on the subject."

"Thou knowest more about the matter than I do, Epergos; but thou wishest to make me talk; the question is a complicated one, however, and I am afraid I should tire you."

"By no means," said the guests, "there is always something good to be got from a discussion between clever people; go on therefore."

"Let me have a tablet, then, Chremylus; for I cannot explain myself without the help of a drawing."

One of the slaves having brought one of those boards painted white, on which merchants reckon up their accounts; and a piece of

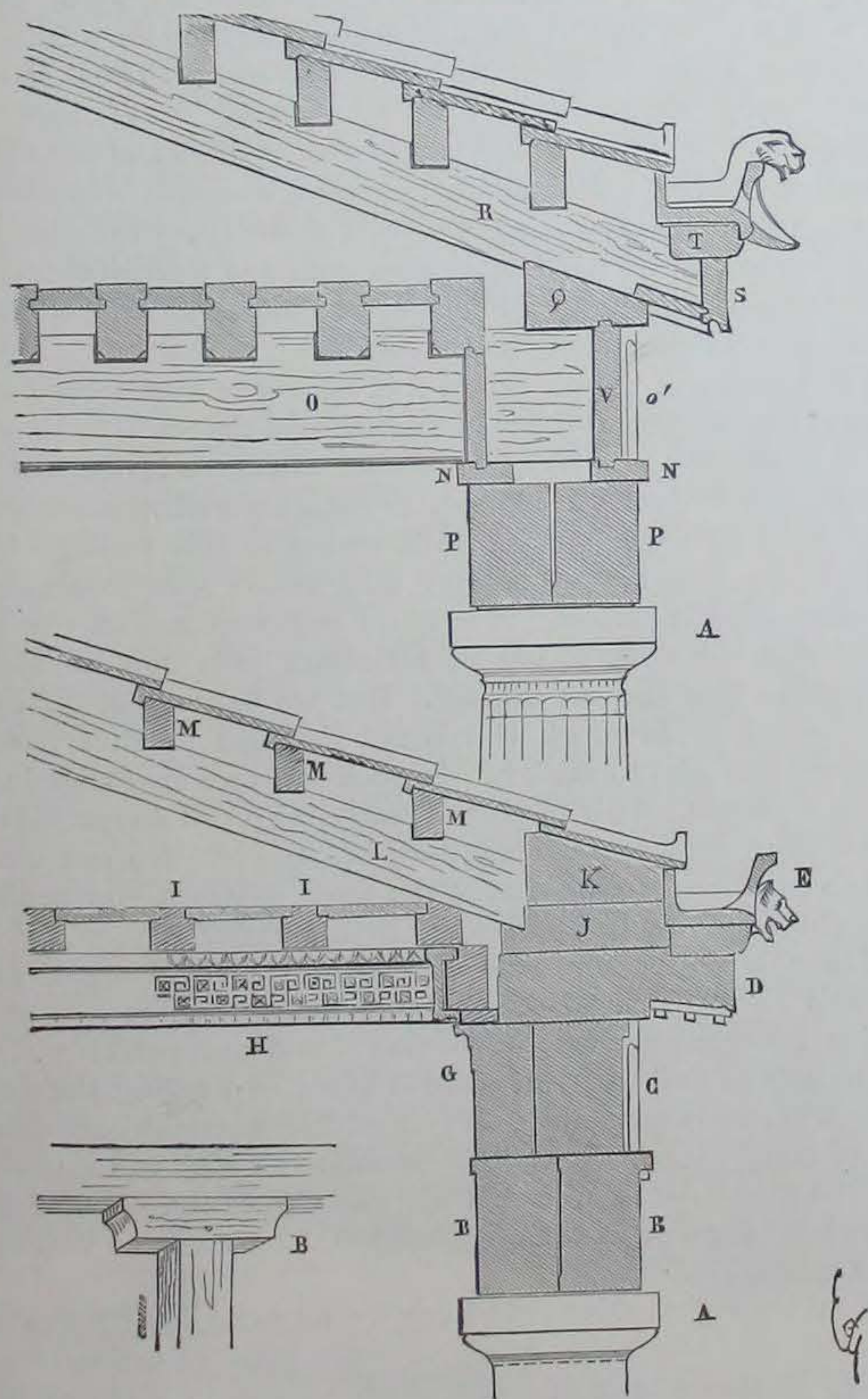
ture. Epergos, who has seen so much of the world, is more fully informed respecting this fact than I am. Some assert that the buildings of the Dorians in early times were originally constructed of wood, and that the forms of the order adopted by them are only a tradition of those early structures. For myself, I do not believe anything of the kind; for what I have seen on the coasts of Asia, where they still continued to build almost entirely in wood a short time ago, does not resemble the style in which we formerly built here. I maintain, on the contrary, that the necessity under which the Dorians lay of employing stone in the countries where they settled—countries which are not rich in timber—dictated the forms of certain important parts of the order originated by them. Thus, for example, it is evident that the form A of the Doric capital could not be given to a capital in wood. If a cap of wood is to be placed on a post to support a beam, and to relieve it, its section would be as I have drawn at B; and in fact those who have visited Lycia and Caria may have seen wooden capitals of this form, and imitations of them in stone, preserving that form. To decorate the extremities of the capital, they have sculptured volutes upon them; and it is to them we must look for the origin of the Ionic capital. But it is very evident that the Doric capital, with its round columns and its square abacus, has no relation to the form that would be given to a piece of wood.

"That in early times they should often have made architraves of wood, such as we still make in our private buildings, is perfectly natural. Nevertheless, you will observe that the intercolumniations of the Doric order, in our oldest monuments, are very narrow; and that the reason of their being so was that too great a bearing should not be given to lintels or architraves of stone. If these architraves had been made of wood, the columns need not have been brought so close together, nor so great a projection given to the echini of the capitals; and we see distinctly that the further we go back to antiquity, the greater is the projection of these Doric capitals beyond the shaft of the column, in order as far as possible to relieve the architraves, which were then cut for the most part from stone of no great tenacity; whereas, as soon as they employed harder stones, such as marble, they enlarged the intercolumniations, and diminished the projection of the echinus of the capital. Moreover, if we employ neither stone nor marble for architraves, but wood, we make the intercolumniations wider, as you have seen here in the courts.

"Next let us pass to the frieze. Some have, in like manner, asserted that the triglyphs which usually decorate the frieze in the Doric order represent the ends of the wooden joists which originally rested on the architrave: no conclusion is more unwarranted. In the first place, in our most ancient Doric edifices there are triglyphs in the frieze under the pediments, as there are in the lateral friezes. Now if the joists had their bearings upon the lateral architraves, they could not at the same time bear upon the architraves in front; and therefore their ends would not be visible there. It will be said that we have here an imitation—a tradition; I believe it is nothing of the kind. I appeal again to our most ancient buildings. In them we often observe that the triglyphs are stone blocks supporting the cornice, perpendicularly above each column, over the middle of the intercolumniation and the angles; while the metopes—that is to say, the spaces left between these triglyphs—remain void.

"The cornice, on the other hand, is evidently the consequence of the projection of the roof timbers; consequently its form must have been partly suggested by the predominance of wood in the construction. But it must be said that this original form was especially appropriated to the employment of stone, and that for a very considerable time. But—and it is in this that the Athenians show the versatility of their genius—without belying the forms which the material ought to dictate, a Doric entablature may be composed as well with timber as with stone, a few details excepted; and these two drawings will prove it.

"Let us first take the structure in stone: on the capital A architraves B are laid,—in two parts; for if one of the stones is imperfect, there is a chance that the other may not be so. These architraves bear from one column to another, the joints being perpendicular to the centres of these columns. But then, as I was saying, the intercolumniation must be narrow enough to prevent these stone architraves from having too long a bearing. Therefore, if we employ



THE DORIC ORDER.—FIG. 67

black stone, Eicos drew in a few minutes the two diagrams (figure 67); then, having given the board to the slave to hold, so that every one could see it, he spoke thus: "Those who have reflected on the architecture adopted by the Dorians, perhaps know from what a variety of sources they have derived the elements of their architec-

this material, we do not allow more than two diameters (taken half-way down the column) between them, whereas if we adopt a wooden entablature these intercolumniations may be much wider. Next, the architraves being in place, we put over each column and in the middle of each intercolumniation, a block of stone, to which the name of triglyph is given, because it is usual to cut three vertical grooves on the exterior face of these blocks, to express their function as supports. For you will observe that when we desire to give an appearance of rigidity to a stile or vertical support—the columns, for example—we repeat the vertical line by flutings, lines, or grooves; this is a matter relating to art. On these triglyphs which thus form so many little piers on the architrave, the cornice *D* is placed, whose projection and profile remove the gutters *E* from the faces of the work beneath.

"This done, we may fill-in or leave void the spaces between the triglyphs; and put at the back a course *G*, whose projection receives the ceiling of wood *H*, composed of small beams which are covered with paintings or terra cotta,—beams which carry the joists *I*, between which are placed panels of glazed terra cotta, or of wood. The cornice receives the courses of stone *J K*, on which rest the rafters *L* of the roofing. Upon these rafters are notched the small purlins *M*, which serve to carry the tiles, and hinder them from slipping. You observe that this structure is very simple, that each part serves a purpose, and that while nothing is deficient, there is not a single member which could be suppressed as useless. It is evident, therefore, that everything here has been combined in rational conformity with the nature of the material employed, namely, stone.

"Is it desired to construct with wood, for economy, or because we want wide intercolumniations and a slighter structure? On the capital *A*, of stone or marble, we put the two girders *P* of wood, which form the architrave, then the two listel plates *N*; over each column we put the beam *O*, whose end *Q* forms a triglyph or support for the cornice. Upon these triglyphs we place the plate *Q*, receiving the rafters *R*, which, overhanging, form a projection, and receive at their extremity a board *S*, forming a front of the eaves-drip, an upper plate *T*, to receive the gutters of terra cotta, and the upper part of the drip. Between the triglyphs—which, in this case, only show over the columns and not between them—may be inserted the planks *V*, composing the frieze. It is in this manner that the entablature of the portico in the great court of this house has been made. (See figure 65.) The timbers, being all in the free air, and with spaces invariably left between them, cannot ferment or decay. Here, as in the stone structure, there is not a useless piece. The wooden girders are relieved in their bearing, and serve no other purpose than to stay the columns. As these timbers are carefully painted, protected from the wet, and ventilated, they may last for centuries.

"You see, therefore, that the form given to the entablature of the Doric order, can be adapted, with some unimportant variations, to a structure in stone as well as to one in wood; in neither case involving the necessity of falsifying the form or the structure. I will not dissemble the circumstance that some architects combine the two methods, especially in Magna Græcia, where I have been able to ascertain the fact for myself; that is, they do not hesitate to lay friezes and courses of stone upon architraves of wood; but this is reprehensible, and is considered bad architecture. Wood, which is elastic, light, and compressible, crosswise of the grain, cannot be suitable for bearing stone which is compact, inelastic and heavy.

"I say again: it is scarcely admissible that a wooden structure suggested the stone structure in the composition of the Doric order; indeed I should rather suppose the converse; especially since the farther we go back into antiquity the more the entablatures of the Doric order deviate from the style of a structure in wood, to conform to that dictated by the use of stone. Still it must be acknowledged that our architects have been able skilfully to adapt the form to the structure in both cases."

"By Athene!" said Chremylus, "Eicos shows us that he understands his art! fill his cup, he must be thirsty; I do not regret having got him to put wooden entablatures on the columns of my porticos, since he demonstrates so ably that they are in place there. But,—the rogue! he did not tell me all this when we were talking about putting them up; indeed he assured me that it was a shame to put these painted timbers on columns of marble!"

"It would evidently have been better to complete them with marble," replied Eicos.

"Yes, certainly; but could you protect me against the informers who were beginning to croak like frogs after rain, when they saw these marble columns carted here? And what would they have said if, after the columns, the ox-teams had brought the entablatures of marble!"

"Allow me to ask thee one more question," said Epergos. "I saw among the Medes, and formerly in Assyria, as also among the Tyrrhenians and even the Etruscans, vaultings made of brick, unburnt or burnt, and likewise of stone; and here I have often recommended this kind of construction, which has the advantage of protecting buildings from fire, and preserving the interior effectually from heat and cold. Now both the Hellenes and the Dorians of Sicily and of Magna Græcia have often seen vaultings among the neighboring peoples; why do they decline to adopt them?"

"There are two principal reasons why they do not," replied Eicos; "the first, that the Greeks do not like to adopt the methods of barbarians; or, if they do adopt them, it is with very considerable modifications. The second is that Greek artisans make a point of doing honor to their labor, and that vaultings require a coarse kind of toil which is not to their taste. Whether they are built of brick or of stone, recourse must be had to a great combination of appliances, and a multitude of workmen, thick walls must be built, the vaults must be turned, and the haunches filled in. Now thou must observe that we do not use lime or mortar in our masonry, as is the custom in Media and in Egypt, but only to make plastering; and vaults cannot be built without mortar. We might certainly compel slaves to perform this work, which requires more sweat than intelligence, but we are averse to doing so. Our workmen are organized in jealous corporations, who do not like to see barbarians engaged in works which they take a pride in accomplishing themselves. Thus slaves are employed only for carting, for work requiring brute force, or for bringing materials to the grounds. Our carpenters and stone-cutters, our sculpturers and painters, are free men, endowed moreover with an excessive amount of *amour-propre*: they desire that their labor should be appreciated, and I have often seen common workmen take their friends along a building newly finished, to show them the stones they had cut, or the timbers they had framed.

"The capitals of the portico in this residence were turned and cut by four skilful workmen; if one of them should chance to be summoned into the house, you may be quite sure he will cast a loving look at the parts wrought by him. He knows thoroughly well whether they are on the right or the left side. It is owing to this feeling of pride, which is sometimes beyond bearing, that we are able to secure work whose execution is perfect. It is quite sufficient to tell one of our artisans that the work of one of his comrades is more careful than his, to make him surpass himself. But we have great difficulty in getting even tolerable work, if it is not destined to attract observation; every one tries to shirk it. In such cases we are obliged to have recourse to slaves. This too is the reason why you do not see among us enormous edifices such as those of Egypt. No one could be found to cut the crowning stones, the work in which—on account of the height—can only be appreciated by the birds."

"There is matter for reflection here," said Epergos, after a moment's silence. . . . "I see how the matter stands . . . and this explains antagonisms whose motives I did not perceive . . . You love the arts so well that you make a point of keeping their various expressions within easy grasp. If your edifices are small compared with those of many other nations, it is because you wish to enjoy all their parts at a glance,—to embrace their *ensemble* easily. Hellas has no such palaces to show as those of Babylon, which are too vast for one day's exploration."

"You are right. Not only have we no taste for edifices of too vast a size, and which, consisting of many parts in juxtaposition, do not possess that stamp of unity which we require in every work of art; but thou wilt observe that the Greeks, in contradistinction to other nations, avoid a multiplicity of architectural features in their buildings. Whether it be a temple, a public building, or a private house, moderation is the supreme law; and it is rather by the judicious arrangement of the structure and the study of the proportions that these edifices seek to please, than by the profusion of the

ornaments and the accumulation of those striking details which gratify barbarians. It must not be forgotten that we are a free people, jealous and sensitive to excess; inclined to criticism, and sparing of expense. Citizens, therefore, who are so fortunate as to possess large property, must be careful not to make a public display of it, and not offend the democratic sentiments of the nation by a show of luxury. Athens has many citizens, like our host, who might make a display of their riches; but what purpose would that serve except to excite envy and malevolent suspicions? A stranger passing through the streets of Athens might suppose that all its inhabitants lived in dwellings nearly equal in style. To mention only one example, the house of Clito, which is next to this, presents to the public road an entrance greatly resembling that of Chremylus. Yet Clito is a poor fellow who lives on chick peas. The dwellings of the Athenians are distinguished from each other only by the luxury or poverty of the interiors, into which intimate friends alone are admitted. Besides, we have not the resources either in gold or labor, which the kings of Egypt and Persia can command; we have not armies of slaves or a plebs subservient to our orders; it would be impossible for us to equal or to surpass in extent or riches the public monuments of those countries. It is, therefore, in beauty and excellence of form that the Greeks have attained that superiority which is conceded to them in works of art."

"But what dost thou say about the use of numbers, of which the Egyptians are so fond?"

"In that department the Egyptians have been our teachers; and historical traditions agree in affirming that we have derived from them the methods in use among us for a long time past."

"And so you make use of these methods in the design of your buildings?"

"Certainly, they are prescribed in our schools. The Doric order, for example, which plays so important a part in most of our structures, is subjected to rules determined by certain numerical relations. Not only, however, should I weary you by going into details on the subject, but these are mysteries which our corporations do not allow us to reveal to the uninitiated."

"Thou art very coy with thy mysteries, Eicos," said one of the philosophers; "everybody knows them or may know them by measuring a building; it is easy enough, then, to discover these numerical relations."

"It is not so easy as thou thinkest," replied Eicos; "for it is necessary first to know at what points these relations are determined. Thus, for example, thou art aware that a shaft of a column is wider at its base than under the echinus of the capital. Well, then! if the height of the column is to be a certain multiple of its diameter, is it at the foot, the middle, at the upper end, or at the third or fourth part of the shaft that thou wilt take this diameter or modulus?—tell me! Thou canst not answer. . . . If, moreover, I add that in certain cases the modulus will be taken at the base, and in others at the middle or at a third of the height of the shaft, how couldst thou discover the method adopted by the architect of such a building? At any rate, what tedious experiments must be undertaken to solve the questions! Thou hast no little difficulty in learning the character of a child, who in his simplicity does not hide from thee his thoughts, who is like an open scroll before thee, who obeys all his instincts, and who is always near thee. Thou believest him to be gentle and affectionate; but some day thou discoverest that he is cruel, and that his supposed gentleness is hypocrisy. Thou thoughtest him irritable, yet on a certain occasion he surprised thee by his patience. . . . And yet thou wouldst presume to find out measure in hand, how a building has been designed, which is perfectly silent, which neither feels nor manifests any sentiment, but which, in every part of its plan, contains the calculations, the thoughts and sentiments, of a man whom perhaps thou hast never seen!"

"Bravo! Eicos!" said Chremylus; "crush this philosopher who presumes to discover the mysteries of thy art! A crown for the victorious Eicos!"

"Stop a moment! I have not yet answered our architect, who, like his brethren, pretends to make his art the sanctuary of the most formidable mysteries—the centre of the most exalted intellectual emanations. What dost thou say, Eicos, to this Thessalian apple?"

"It is beautiful, assuredly, with its carmine skin of that brilliant

tint which glows in the cheeks of our country girls when they quicken their steps to be early in the market."

"Good! Thou wilt admit that this fruit is wonderfully adapted to satisfy the taste, the smell, the sight, and the touch; that it is well proportioned as a whole and in its parts? Now what produced this luxurious pulp so fairly enveloped?"

"An apple tree, probably."

"Very good; but dost thou think that the apple tree knowingly calculated the relation of the diameter of this apple, the tension of its soft and shining skin, the number and arrangement of its pips?"

"Wouldst thou, then, conclude by comparing me to an apple tree?"

"Why not? You architects erect buildings which charm us because you have been planted, cultivated, and grafted to that end; as a plum tree to produce plums, a doctor to prepare drugs, and an armorer to make arms. All of you are only intermediate agents of a superior intelligence; and if thy productions are better than those of any of thy brethren, it is that thou hast been planted, cultivated and grafted. But if the apple tree were to presume to be vain of the apples it produced, we should laugh in its branches."

"An admirable conclusion!" said Epergos smiling; "so Eicos and all of us who think, act, and produce, are only unconscious organisms."

"How dost thou know," continued the philosopher, "that vegetables are unconscious? Thou seest, or thinkest thou seest, as Distasis said, that they do not move,—thou dost not hear their voice, what does that prove? At most only the imperfection of thy understanding. The Soul of the World resides in all things; it is equal in value everywhere, only it manifests itself in different ways; the living being itself is only a fragile envelope with which it is pleased to clothe itself in order to attain an end."

"And what is that end?" objected Distasis.

"Well! it is Life—the perpetuity of life; that is something, I fancy! That portion of the Soul of the World which is assigned to each being, returns when we are dead to the common reservoir, to be anew employed, as needed and according to its quality; for we may have made that portion worse or better than it was when it was confided to us. . . . When I say *we*, I mean the apple tree as well as man, the dog, and the rat."

"Eicos is an excellent architect; he acknowledges that from his birth to this day he has been engaged in acquiring the talent which charmed us. But who will assure us that the modicum of the world's soul with which our friend Eicos is endowed, did not begin by occupying the body of a bee, which by superior industry distinguished itself among its kind, and made cells more regular than were those of its companions? Does a bee know what a hexagon is? And why does it always make hexagonal cells?"

"Eicos talks to us now of mysteries in which architects are initiated, of the laws of numbers, and of geometric figures. It is my opinion that those laws were made to fit the facts; as if the bee were now to amuse itself by describing the properties of the hexagon, and how it is composed of six equilateral triangles joined at the apexes. I discern the Soul of the World in the work of the bee, as I discern it in every work of art and in every product of nature. Distasis believes himself alone to be the intelligence that evokes a world which does not really exist; for myself, I see that intelligence everywhere, perpetuating life within matter which exists, but which would be inert without it. And to return to our starting-point, I will put a question to my friend Eicos, if he will allow me."

"By all means."

"Did man invent numbers, or did numbers exist before man? Did man invent the circle, or did the circle exist before man?"

"Numbers," replied Eicos, "exist as geometry exists; all that man has done is to take cognizance of the former and to apply the other to his requirements, arts and industrial occupations."

"Good: then if numbers and geometry existed, the deductions from numerical and geometrical relations existed also; for the number twelve was divisible by two, by three, and by four without man's being wanted to demonstrate the fact; therefore all the laws of harmony in numbers existed; and what your architects regard as mysteries, are only borrowings from a common treasury by those fractions of the Soul of the World which occupy your architects' bodies."

"These are subtleties about which I do not concern myself," returned Eicos. "What I can say is, that the modicum of the Soul of the World which has fallen to my share has sometimes great trouble in getting out of difficulties, when by the aid of the means afforded us I have to satisfy the caprices of my clients, and my own conceptions of what should be done. I do not think that the apple tree or even the bees can have these anxieties. I do not, however, the less thank thee for having assigned as my origin the body of one of those deft little workers of Hymettus; for it was not a very pleasant idea that I began life in the trunk of an apple tree. But by Bacchus! I am dying of thirst: give me something to drink!"

Thus passing from one subject to another, the conversation, now serious, now humorous, was prolonged till sunset. Then the guests went into the garden to breathe the cool and fragrant evening air. At night, each of them preceded by a slave carrying a lantern, returned to his abode.

"A choice set of maniacs!" said Doxius to his companion, when they were alone in the street.

"Yes," replied Epergos—"beings with a mania for ideas, a mania for discussion, a mania for investigation, a mania for criticism and for the examination of everything. It is a noble frenzy, by all the gods; thy Persians do not turn up as many ideas in a whole year, through all the city of Babylon, as have been brought under discussion this evening at our friend Chremylus's."

"Assuredly; and they would have the good sense not to suffer it."

"So thou thinkest."

"Certainly! is there a single community of men that could make head against this torrent of extravagances, this liberty of saying anything, and discussing everything, unless the magistrates of their state did their best to repress such intellectual licence?"

"Nonsense, Doxius! this people, with its small territory, and its city equal at most to one of the quarters of Babylon, will live longer in the memory of men than all thy Persians and Egyptians put together."

"Yes, it may be so,—to pervert their minds, and turn them away from wisdom. What are these philosophers, so highly esteemed in Athens, who have no regard for the gods, or for hallowed traditions, and who are continually calling in question eternal truths and time-honored beliefs? They are spirits of darkness, destroyers . . ."

"Come," interrupted Epergos, "none of this antiquated nonsense for me! Thou hast been harping on this string for some thousands of years, yet the world of humanity, whose extinction thou art continually predicting, lives on, develops, and advances."

"It does advance, certainly—over a heap of ruins."

"But my good Doxius, does not the growing forest live on the deposits accumulated at the foot of young trees, and are they not vigorous in proportion to the age and thickness of those deposits?"

"That decay gives thee satisfaction, then?"

"No; but I turn my gaze to the vigorous shoots that issue from amidst it."



MISCELLANEOUS

STABLE FITTINGS.

See illustrations on page 291.

THE stalls shown are designed with a view to being made by a carpenter, and to avoid as much as possible the necessity of employing manufactured fittings.

The sides or partitions of stalls are so made that the upper portion is firmly secured by the upright boards being held between the two upper rows of horizontal boards. The cap is of plain detail, with groove on the under side to receive the ends of the vertical boards.

The front of the hay manger is made perfectly tight and extended to the floor. The vertical partition and grating in the bottom of the manger are so arranged as to allow all dust and dirt to fall out into the feeding passage. This formation of the manger makes it impossible for a horse to get cast and to lacerate his legs. All wood-work liable to give an opportunity for a horse to "crib" upon should be covered with zinc or galvanized iron.

The posts are firmly secured to the floor joists, giving greater stability to the posts. The floor is so inclined as to carry all water to the stall drain. Upon this flooring cleats are secured, leaving about a half-inch space between. These cleats are so framed together as to be removable for cleaning purposes. The floor should be well caulked and made watertight.

The stall gutter should not be too deep, and should be of sufficient width to ensure against danger of injury to the horses. The lower boards of side partitions should be set slightly apart, to secure better ventilation of stalls.

The cost of one stall (*i. e.*, two side partitions, the front and manger, floor grating and four posts) is about \$35.00, if done in yellow pine. Each adjoining stall would cost about \$22.00 more.

The harness case is simple in construction, and is susceptible of change in width to suit. The cost of one of the size shown, made of white pine, stained and oiled, is estimated at \$25.00.

The drawings are made to a scale of $\frac{3}{8}$ -inch to the foot.

POULTRY HOUSE.

See illustrations on page 292.

THE yards in which the fowls are to run are supposed to extend out from what is termed the front. The openings through which they enter the yards, shown in the drawing, are closed by sliding lids inside. The runs may extend out any distance from the building, and are generally enclosed by wire netting. The run for each section should be partitioned from its neighbor by wire so that no overcrowding of the roosts and nests may take place by too many fowls entering any one section of the house. Having once entered the house, the fowls cannot pass from one section to another, the sections also being separated by wire netting. These wire partitions do not at all interfere with the free circulation of air throughout the whole building. The passage partition and the doors are of matched boards to a height of 4 ft., above which they also are of wire.

The building should front south. The whole front is glass, slanted to get the full benefit of the sun's rays.

Ventilators are provided in the roof to allow hot air to pass out and to keep up a circulation. A cement chimney is placed in the central room, where, in winter, a large stove will supply heat for the building. Only the central room, where the incubator is to be placed, is floored with boards. A dry earth floor, in which they can scratch, is best for the health and comfort of the feathered inmates.

The nests are placed at the back of the rooms along the side of the passage, resting on the floor; they have an open front; the backs are closed with a hinged lid in the lower part of the partitions, which can be lifted up to remove the eggs, without entering the rooms.

Sixteen inches above the nests, and hinged to the passage partition, is a board platform, extending out three and a half feet, the front resting on two posts or legs, to which it is fastened. Four inches above the platform is a light frame, also hinged to the passage partition, to which are fastened three round roosts. These are to be turned up during the day-time. The platform keeps dirt from the nests and catches all droppings, which can be easily removed every morning. When it is desired to clean out the nests the platform can be turned up.

There are five nests to each section. Each section will accommodate fifteen fowls. Experience has shown that it is better not to let a large number of fowls run together. If kept in small squads they are cleaner, disease is not so likely to spread and they lay better.

The estimated cost of the above described poultry house is \$328.63.

POULTRY HOUSE.

See illustrations on page 293.

THE poultry rooms have glass roofs. The fattening room has two small windows, high up. The fowls fatten better in a comparatively dark place.

Separating the fowls into small companies is not carried out here, as in the design shown on page 292, but it can be done by simply dividing up the rooms by wire netting.

The same arrangement of nests is used as shown on page 292.

The central portion has a loft in which are a storeroom and a dove-cote. The estimated cost is \$790. The sides and roof are shingled.

ICE HOUSE.

See illustrations on page 294.

THE foundation of this combined ice house and cold room should be started sufficiently deep to avoid the action of the frost, may be made of either brick or stone and should be carried up to the under side of the sill. The sill is 4 x 8 inch yellow pine, and should be set in cement, weathered. Upon the sill rests the 3 x 4-inch hemlock studding and 4 x 6-inch hemlock corner posts. The lower floor joists of the ice chamber also rest upon the sill and should be spiked to the studding, which is to be set 12 inches on centres. The upper floor joists are to be carried on a heavy girt, 2 x 6 inches, laid on top of the furring strips, which form the air passage.

The entire exterior walls to be sheathed on the outside with $\frac{7}{8}$ -inch hemlock sheathing, laid horizontally, covered with rosin-sized sheathing paper, well tacked on, and finished with clapboards or novelty siding, with bands, casings and mouldings. All to be of good quality white pine, free from defects. The walls to be sheathed inside with matched $\frac{7}{8}$ -inch hemlock, laid diagonally. The air space around the ice chamber is made by nailing 2 x 2-inch furring strips against the inner sheathing and directly over studs, and then covering with 1½-inch yellow pine tongued and grooved boards laid closely.

The space between outer and inner sheathing to be filled in with mineral wool or some good non-conductor. The rafters to be ceiled on the under side, and the space between rafters left open at the eaves, to admit a free passage of air through and out at the ventilator.

The doors to be constructed in the same manner as the walls, to have beveled edges and to be hung on strong hinges, fastened with hasps and padlocks.

The floor above the high part of the cold room to be covered with any suitable and durable material, and carried up back of inner lining of the ice chamber, and made perfectly water-tight to avoid dripping.

The lower floor of the ice chamber is made of 2-inch planks, 6 inches wide, laid about a half inch apart, so as to allow the water and cold air to descend to the cold chamber. As cold air always has a downward tendency, by this means the cold chamber gets the full benefit of the ice used, and is further assisted by the ventilation of the chamber, which allows the upper and warmer air to escape. The water running in the gutters on the cold room floor (so arranged as to make water traverse the distance several times before leaving the building) also helps to reduce the temperature.

The shelving to be perfectly plain, supported on cleats against the wall at one end and hung at the other end by $\frac{3}{4}$ -inch iron rod. Hooks to any desired number to be placed at the side of the shelving for hanging meats, etc.

The floor or entire cold chamber to be made of concrete, covered with a coating of cement, made smooth and so arranged as to have the water run in the direction of the arrows and discharged through trapped pipe to outside of building. Lay a wooden grating where necessary to walk upon.

The estimated cost is \$390.

The scale of the drawings is 3-16-inch = 1 foot.

GREENHOUSE.

See illustrations on page 295.

THE greenhouse shown is not wholly for fine display nor for simple hothouse purposes. It is intended to combine the better qualities of each class as much as possible. The aim has been to make it possible for the builder to do the work himself and attain the same ends, as nearly as possible, as if patented appliances were used.

The foundation walls should be built of the best hard burned brick, laid in cement mortar. The bricks will crumble after a time unless of good quality. The topping out of the foundation walls should be of cement, with a sufficient wash to prevent water lying on top of wall and rotting the plates on which the sashes rest.

The section of sash muntin shows clearly how any condensation on the under side of the glass is carried down to the wall by the little grooves or gutters in the sides of the muntin. This does away with the unpleasant dripping that would otherwise occur.

The building should extend north and south, and may be of any desired length; the building shown in this plate is 30 ft. long and 12 ft. wide, inside dimensions. When it is impossible to run the building north and south, it should have the ridge tree near one side, with almost the entire sash exposure sloping to the south, so as to obtain the greatest sun exposure.

The hotbeds may be placed at both sides, or only on the more exposed side, or they may be left off altogether. They form a good protection to side walls, and early lettuce, etc., can be raised by using very little more heat than that required for the greenhouse. The hotbeds are formed by posts set in the ground, at short intervals, with planking (coated with tar or some other good preservative) spiked to the posts to form the sides, and ordinary hotbed sash placed thereon.

Several good heating apparatuses are in use. The best results are obtained by using hot water circulating in pipes. Steam cools off too rapidly.

The ventilation may be secured by using iron bars, having a saw tooth edge, hinged to the lower end of the ventilation sash. This will hold the sash at any desired angle by having the saw tooth edge fit into suitable stops.

By many it is considered desirable to raise all the ventilation sashes at one time. This may be done and several forms of opening attachments have been patented. Although somewhat more expensive, they fill the requirements in every satisfactory way.

The pathway through the centre should be of concrete. In this design it is somewhat wider than ordinary, but is none too wide when it is desired to exhibit the plants, etc., to visitors.

The benches for flower pots should be just wide enough to reach all the plants handily from the walk, and as high as convenient. The plants grow more rapidly when near the glass surface.

The top of benches should be made of narrow planks laid with spaces between, so that water cannot accumulate on them and surround the bases of the pots.

The cost of the greenhouse shown is estimated at \$315, exclusive of heating apparatus and patent sash openers. Flower benches are included. Cost of the hotbed, \$35.

MILL OR FACTORY.

See illustrations on page 296.

THIS building is constructed on the slow combustion principle—that is, the heavy timbers, such as girders, posts and flooring, are made heavier than the factor of safety requires, so that after a fire has charred the wood on the outer surface to a considerable depth, there still remains sufficient strength to support heavy machinery and to prevent the flames from passing rapidly from one story to another.

The foundation to the under side of the first tier of girders should be of good building stone. Above the water table, which should be of cut stone, the wall should be built of hard burned stock brick.

The scale of the plan is 1-16 of an inch to the foot; the details are drawn to a scale of $\frac{3}{8}$ of an inch to the foot.

Where very heavy machinery is to be used, the size of posts, girders, etc., must be increased proportionally. As shown, they will answer for medium weight.

"A" is a section through the outer walls, showing the girders bearing upon and anchored to the wall. "B" is a cross section of building, showing in elevation piers and posts. The brick piers are built upon footings of stone of large size, and capped with 5-inch bluestone. The posts in the first story are 10 x 10-inch, and rest directly on the bluestone caps, and run up to the under side of the cross girder, where an iron cap or separator (see details) rests on each post. The girder passes through the separator. These separators compensate for any shrinkage of the girders, and thus prevent any settlement of the upper floors at the centre of the building.

The roof may rest upon cross girders with centre posts, in same manner as the floors, and be covered with tin, gravel or standard roofing; or roof trusses, forming a double pitch, and covered with slate, may be used.

Instead of the old method of laying central girders and placing beams on these to support the floors, the girders are laid cross-wise, and for the floor beams and lighter flooring are substituted a very thick under floor, covered by a finished lighter floor. These floors may be made so tight by caulking as to prevent water passing through.

No interior stairways are used. Access to the different stories is by means of strong iron stairs, with railings and brackets, fastened to walls like fire-escapes, and located on inner court away from the street.

Steam power is supplied from a boiler-house built at a short distance from and in angle of main building.

The building may be made any desired length, but care should be taken to put in cross walls to stiffen the building and resist any vibratory motion, also to prevent the spread of fire. Doors in the fire walls should be made of heavy plank.

The roof of the tower should be slated. In a tower like that shown by the drawing a large tank should be placed.

The estimated cost of the section of the building at the intersection of the wings (including the tower, 40 x 40 feet, three stories high), is about \$8,500. Each of the ten-foot sections, from centre to centre of posts, three stories high, would cost about \$800.

These estimates are based upon the following dimensions: Footings for outer walls, 36 inches wide, of concrete; foundation walls, 24 inches thick; first story walls, 20 inches thick; second story walls, 16 inches thick; third story, 12 inches thick; piers, 20 inches square, with footings, 42 x 42 inches, of granite; vault walls to be double, i. e., a 12-inch and an 8-inch wall, with 3-inch space between; foundation the same as other walls; vault covered with a 12-inch arch; the walls between the storeroom and office, as well as the wall between these and the mill-room, to be 12 inches thick; the fire walls in basement to be 20 inches thick, and in first and second stories to be 16 inches thick; in third story, 12 inches thick, and to extend 18 inches above roof, forming parapet walls.

The girders in first tier to be 10 x 12 inches; in second tier, 10 x 14 inches; in third tier, 8 x 14 inches; roof tier, 8 x 12 inches. First story posts, 10 x 10 inches; second and third story posts, 8 x 8 inches. The under floors are 4 inches thick, with loose tongue and finished floor, 1-inch

thick. The roof sheathing, two thicknesses of $\frac{7}{8}$ -inch stuff, one laid diagonally, the other straight. The basement is 7 feet high; the first story is 10 feet; the second and third stories are 9 feet, measuring from floor to under side of girders. The first floor is 4 feet above the sidewalk.

BOOK CASES.

See illustrations on page 297.

THE first example of book case shown is a combination of book case and desk. The panelled door, forming the desk, is hinged at the lower edge so as to swing down for use and close up and lock when not in use. Strong hinges should be used, as the considerable leverage is apt to pull the screws out, or break the hinges. The doors at either side below are solid panelled; those above are filled with bevelled edge plate glass. The latter, however, may be made solid, if so desired. Three drawers are provided.

The estimated cost of Book Case No. 1, made in cherry, is \$75.

Book Case No. 2 is made of four pieces of 1½-inch plank for the up-rights, having the front edges worked as shown. The top and bottom shelves are stationary, while the others are made so as to adjust to any desired height. The panelled front is hinged at the bottom to drop outward at the top about 18 inches. This pocket or closet is used for portfolios, sketches, etc. We estimate it should cost about \$35.

Both Nos. 1 and 2 should be treated with patent wood filler and then with hard oil finish, rubbed down to a dull gloss. If a glossy finish is desired, apply a finishing coat without rubbing down.

The plans, elevations and sections of Nos. 1 and 2 are drawn to the scale of ½-inch to the foot.

SIDEBOARDS.

See illustrations on page 298.

THESE sideboards are such as any carpenter should be able to make without the assistance of a cabinet maker. Where any carved work is shown, plain moulded or turned work may be substituted, and thus reduce the expense somewhat. A marble slab is used for the top of each, but wood may be substituted to reduce cost.

The plans shown are made to represent the half plan above the slab, and the half below the slab.

The plans, elevations and sections are made to a scale of ½-in. = 1 ft.

The estimated cost of No. 1, if made in whitewood and with marble slab, is about \$67.00, and of No. 2, made in same manner, about \$50.00. These prices include treatment with filler and three coats hard oil varnish, either rubbed to a dull gloss or left bright.

DRESSERS.

See illustrations on page 299.

THE kitchen dresser shown in the cut has a wide shelf above the drawers, so that dishes, etc., may be placed thereon.

The estimated cost of each dresser is \$25.00. This estimate calls for whitewood, single thick American glass and bronzed iron hardware. The finish to be cherry stain and two coats of hard oil varnish.

In the pantry dresser the estimate includes a counter sunk marble slab, but it does not include the sink and the plumbing.

The drawings are made to a scale of ½-in. = 1 ft.

The same details will apply, though the dresser may be made of any desired dimensions.

MANTELS.

No. 1, of hardwood, estimated to cost \$14.00.

No. 1, of pine, estimated to cost \$9.00.

No. 2, top of hardwood, estimated to cost \$35.00.

No. 2, press brick for fireplace, estimated to cost \$25.00.

No. 3, of hardwood, without tiling, estimated to cost \$27.00.

No. 3, of pine, without tiling, estimated to cost \$20.00.

No. 4, of hardwood, without tiling, estimated to cost \$84.00.

No. 5, of hardwood, without tiling, estimated to cost \$35.00.

No. 6, of hardwood, without tiling, estimated to cost \$56.00.

FENCES.

The posts are estimated for chestnut, and run 3 feet in the ground. The estimate in every case includes the posts and the cost of setting, but not the painting. The designs are shown to ¾-inch scale.

No. 1, per lin. ft., 85c., or per section of 6 ft., \$5.10.

No. 2, per lin. ft., 75c., or per section of 7 ft., \$5.25.

No. 3, per lin. ft., \$1.00, or per section of 6¼ ft., \$6.25.

No. 4, per lin. ft., \$1.25, or per section of 6 ft., \$7.50.

No. 5, per lin. ft., \$1.40, or per section of 6¼ ft., \$8.75.

No. 6, per lin. ft., \$1.54, or per section of 6¼ ft., \$9.62.

No. 7, per lin. ft., \$1.20, or per section of 6¼ ft., \$7.50.

No. 8, per lin. ft., \$1.00, or per section of 6 ft., \$6.00.

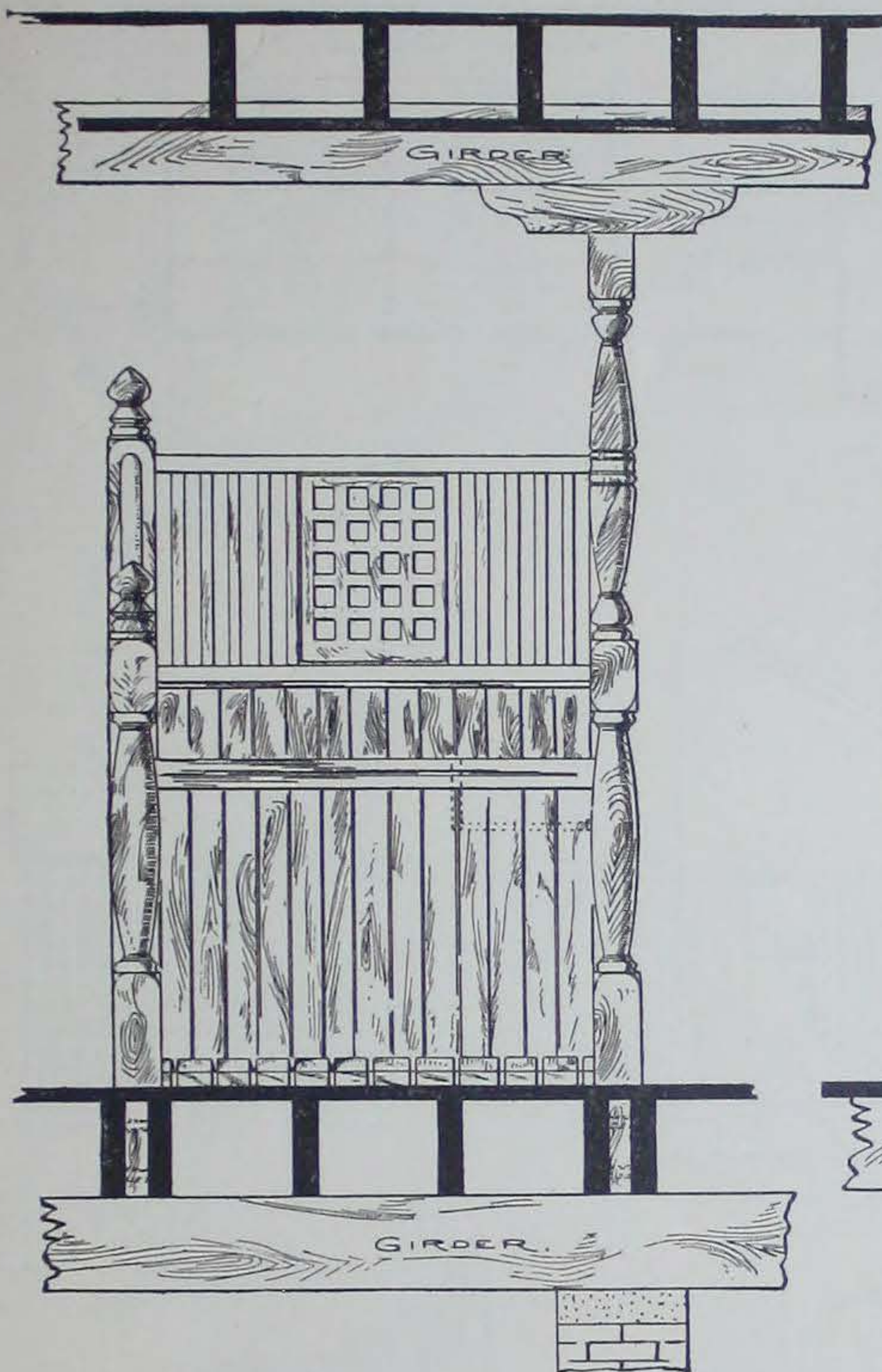
No. 9, per lin. ft., 90c., or per section of 6¼ ft., \$5.62.

No. 10, per lin. ft., \$1.25, or per section of 6¼ ft., \$7.80.

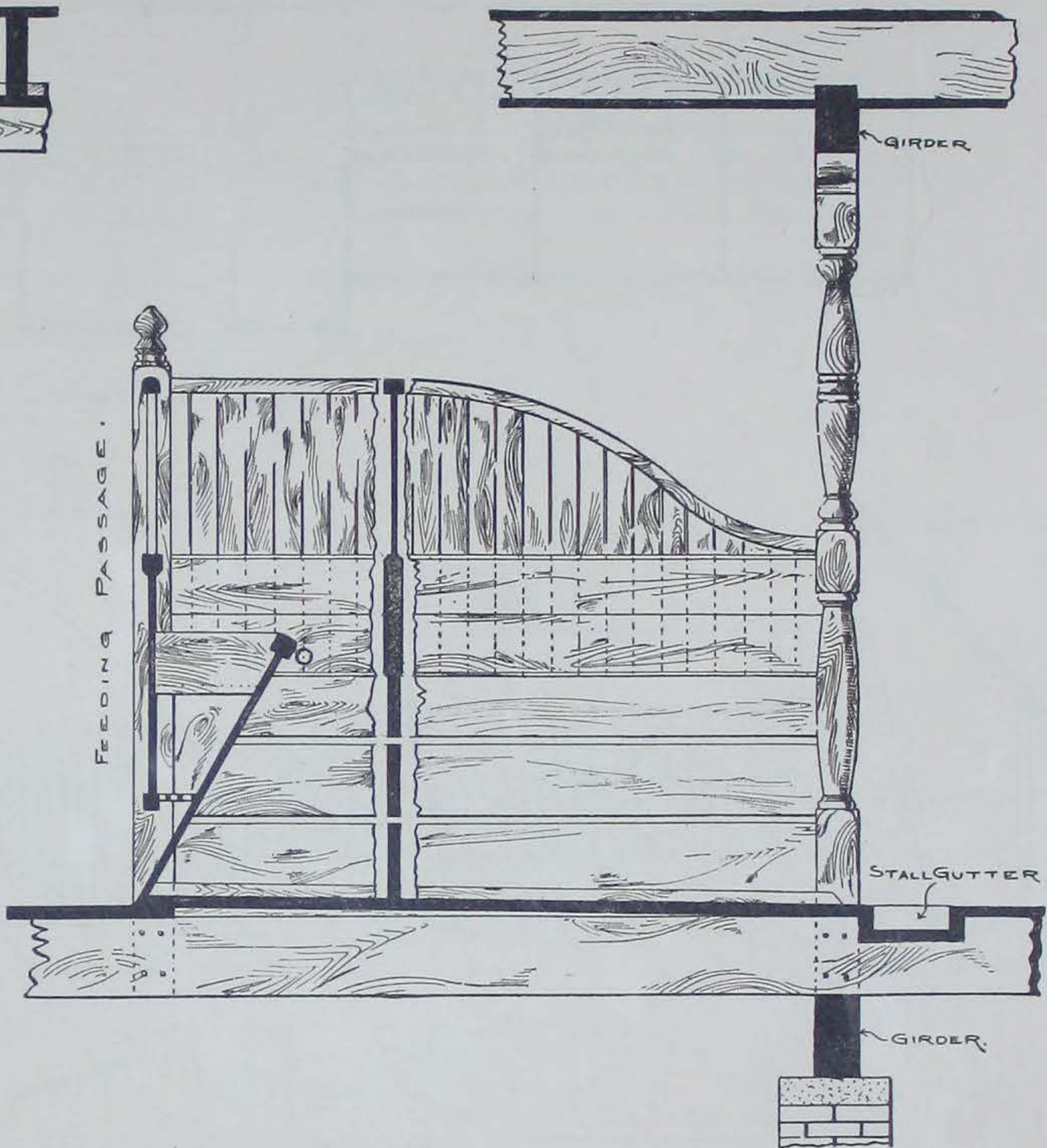
No. 11, per lin. ft., \$1.00, or per section of 6¼ ft., \$6.25.

No. 12, per lin. ft., \$1.36, or per section of 7¼ ft., \$9.86.

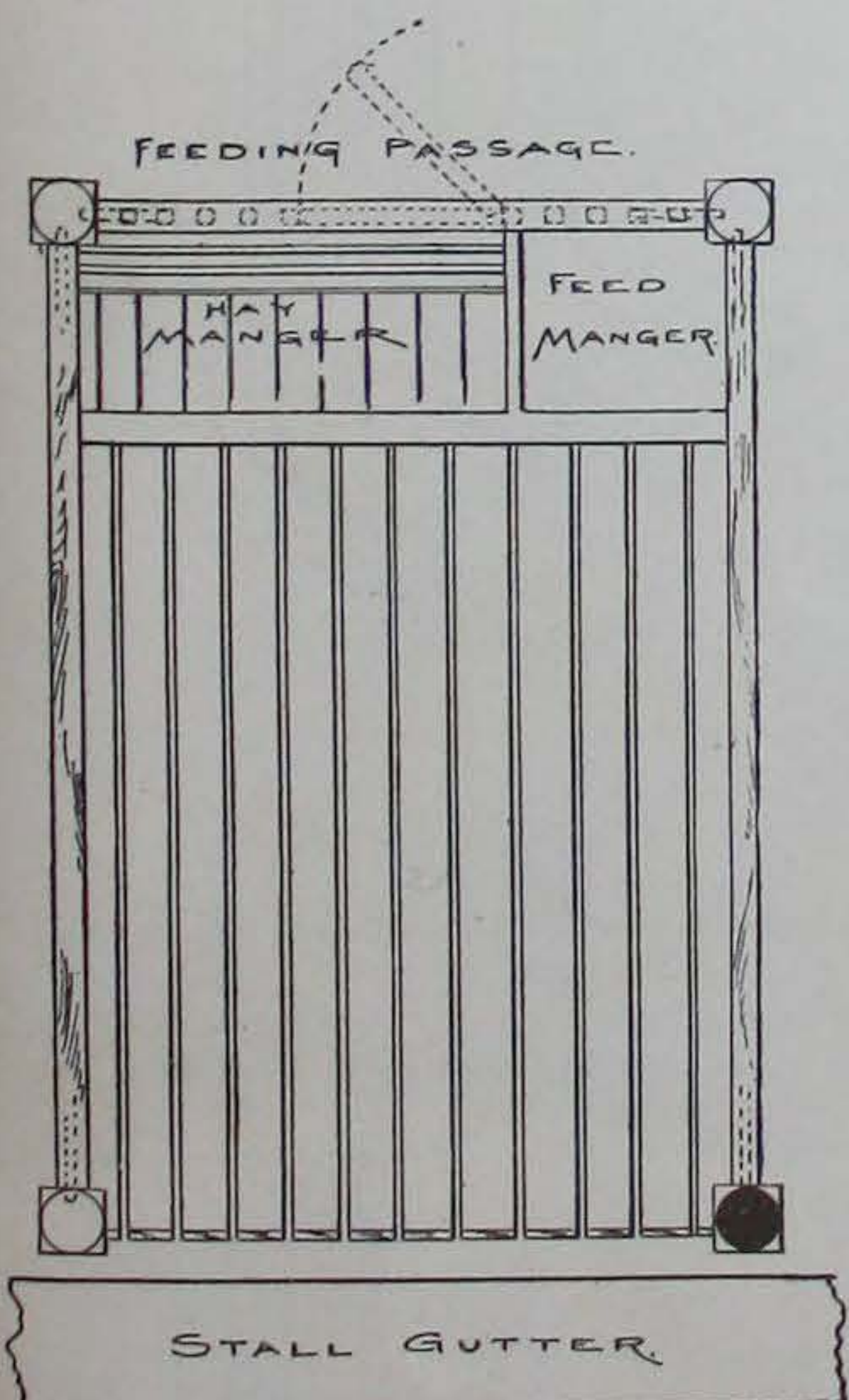
STABLE FITTINGS



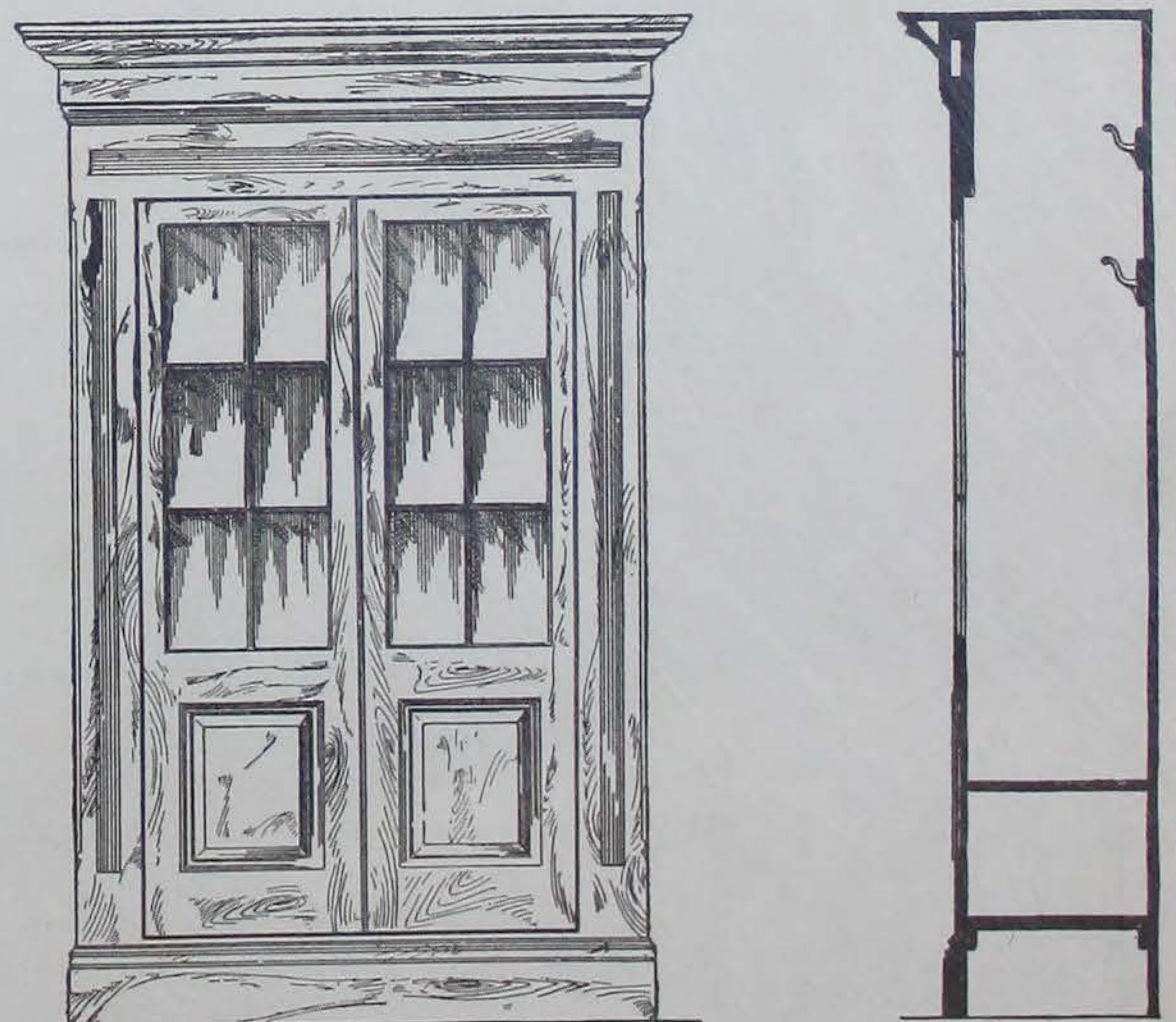
END ELEVATION OF STALL



SECTIONAL ELEVATION OF STALL



PLAN OF STALL

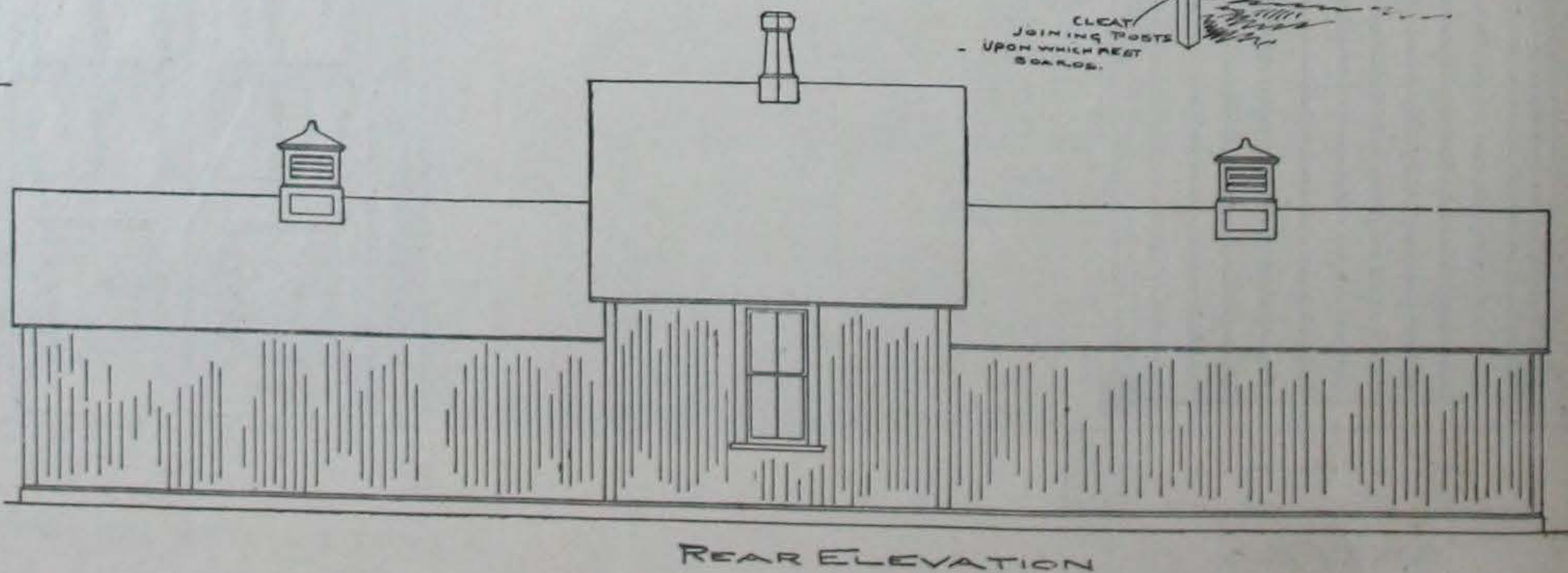
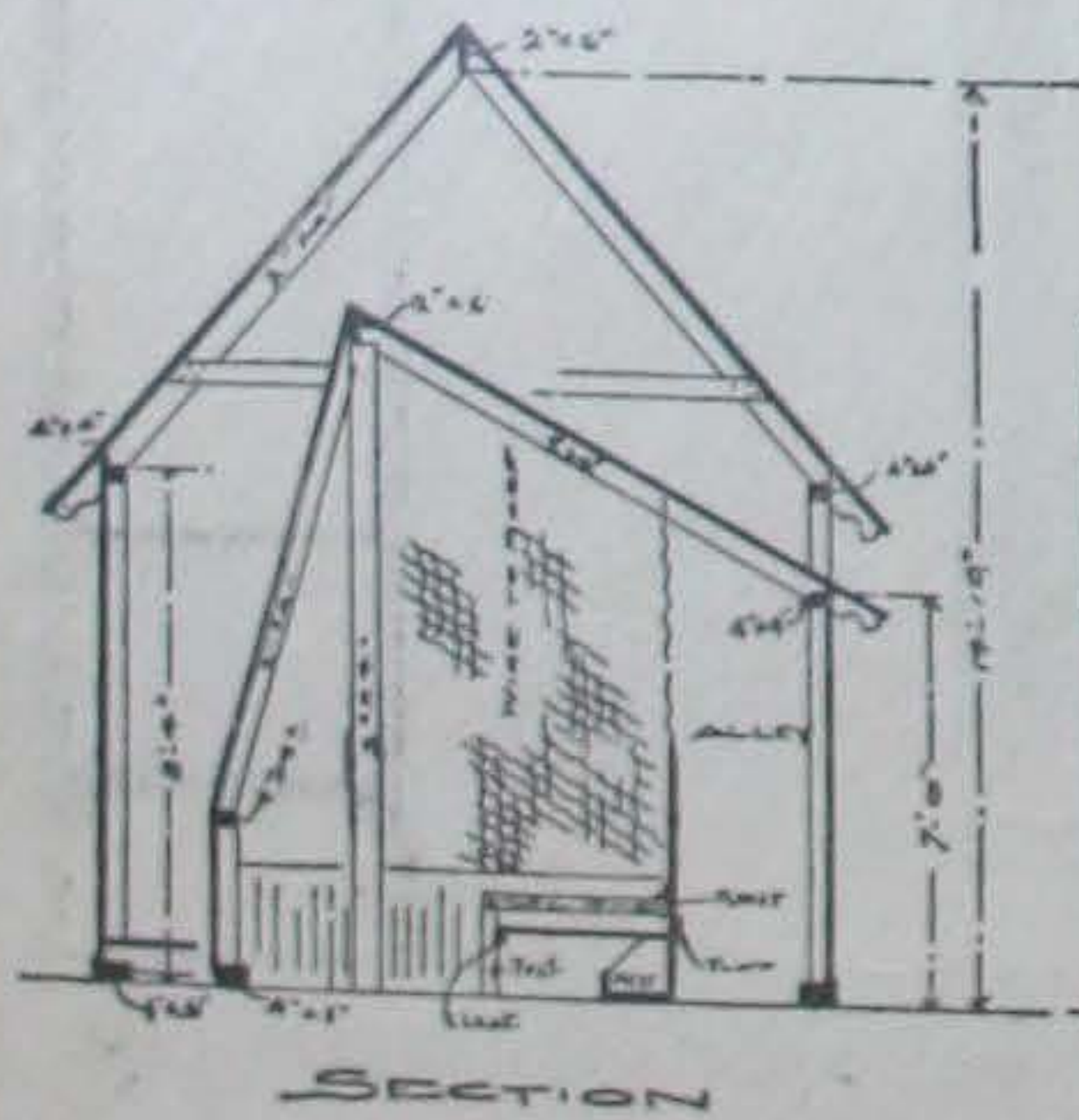
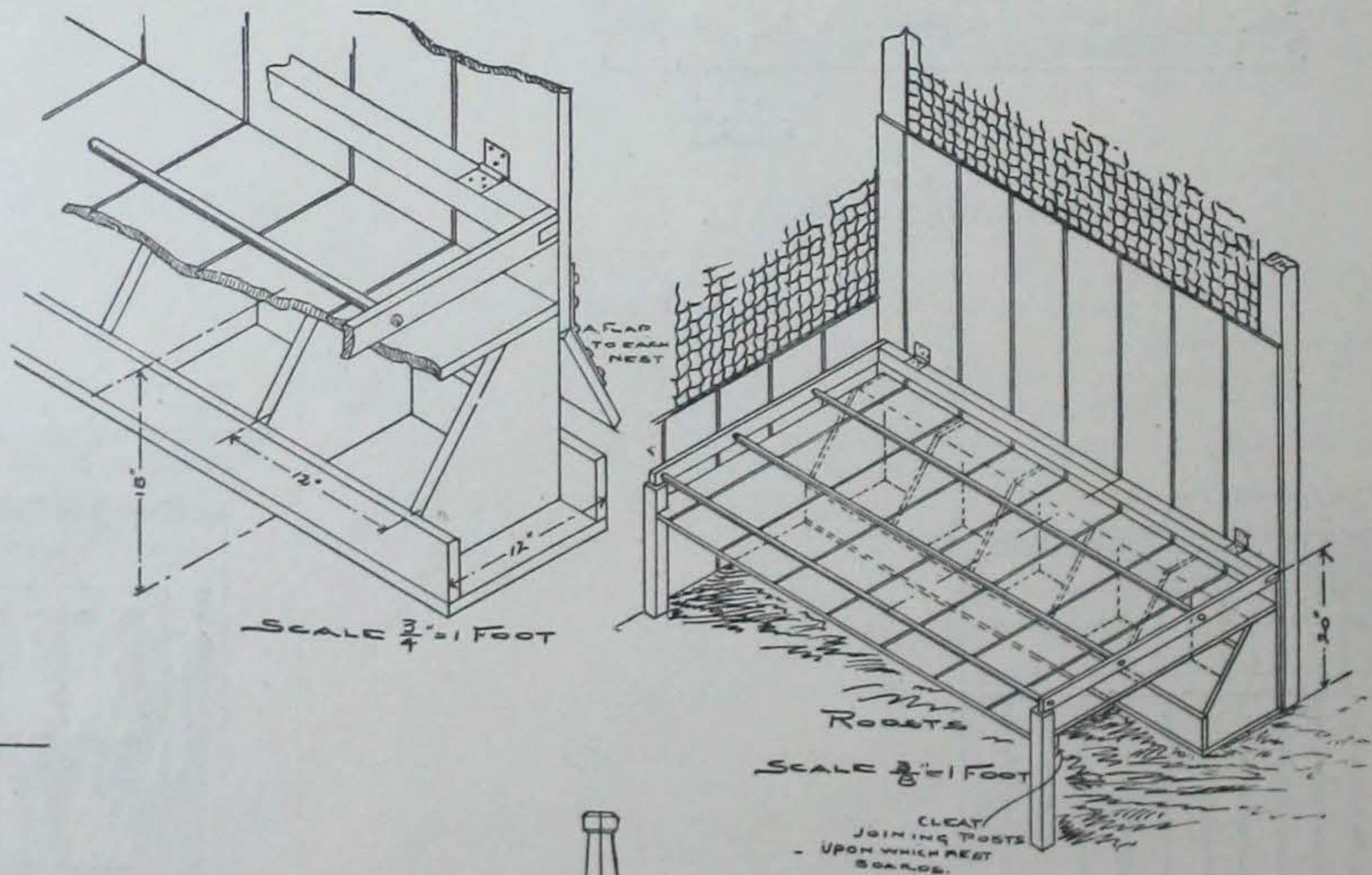
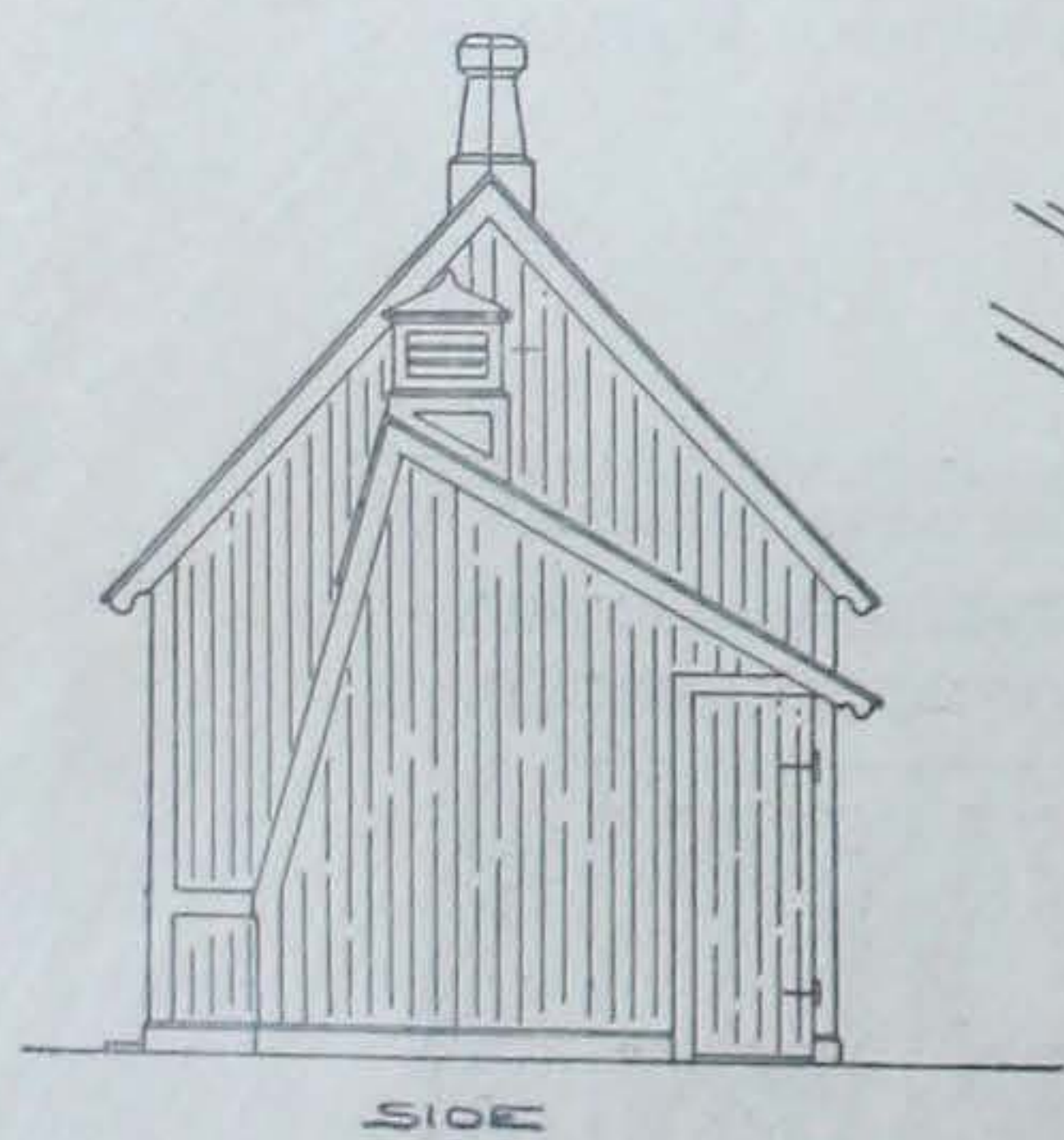
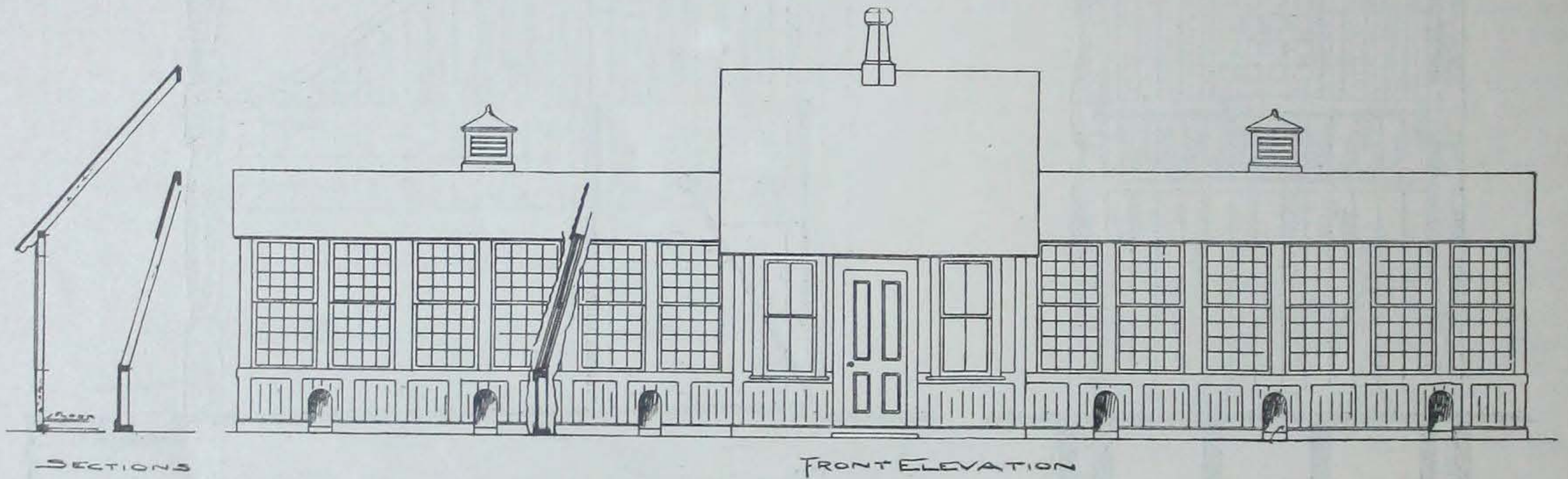
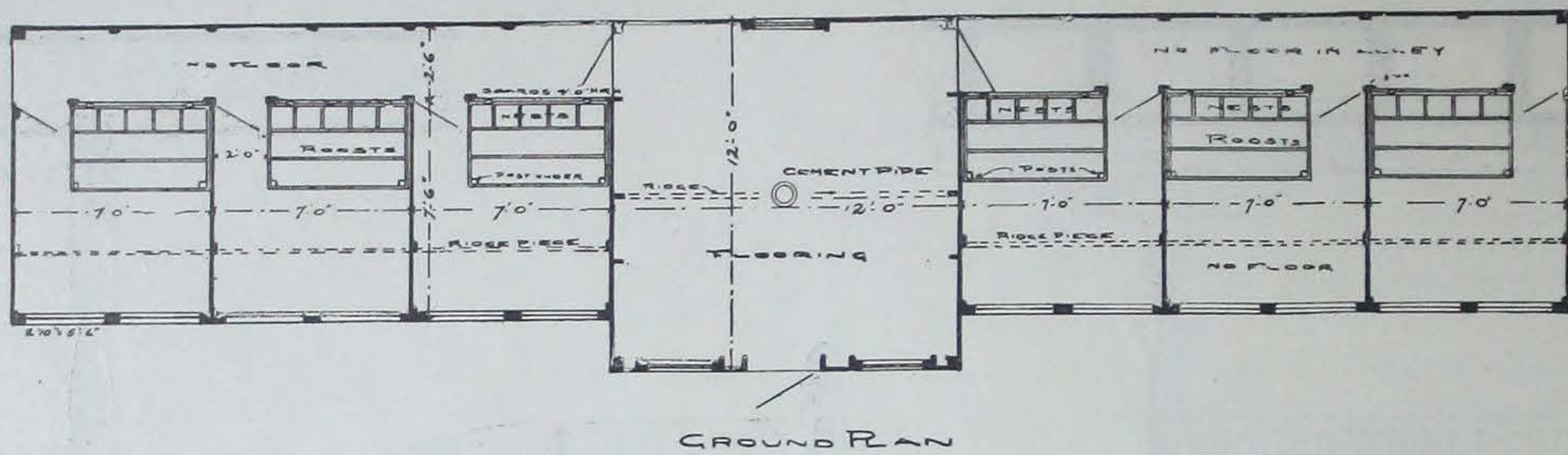


FRONT ELEVATION AND SECTIONAL VIEW OF HARNESS CASE

SHOPPELL'S MODERN HOUSES

See description on page 289.

POULTRY HOUSE



POULTRY HOUSE

An architectural line drawing of a poultry house. The drawing shows a side elevation of a long, rectangular building with a gabled roof. On the left side, there is a small dormer with a gabled roof. The main body of the building has a series of windows along its length. The roof is depicted with horizontal lines, and the walls are shown with a brick pattern. The drawing is oriented vertically on the page.[illegible][illegible][illegible][illegible][illegible][illegible][illegible][illegible][illegible][illegible][illegible]

A hand-drawn floor plan of a building, oriented vertically. The plan is divided into three main sections. The top section is labeled "Store Room" and "for feed rack" in cursive. The middle section is labeled "Dining" and contains a table with several chairs. The bottom section is labeled "Dove Cote" and contains several small, rectangular compartments. The plan is surrounded by dashed lines indicating the building's footprint. Dimensions are given: "14' 7\"/>

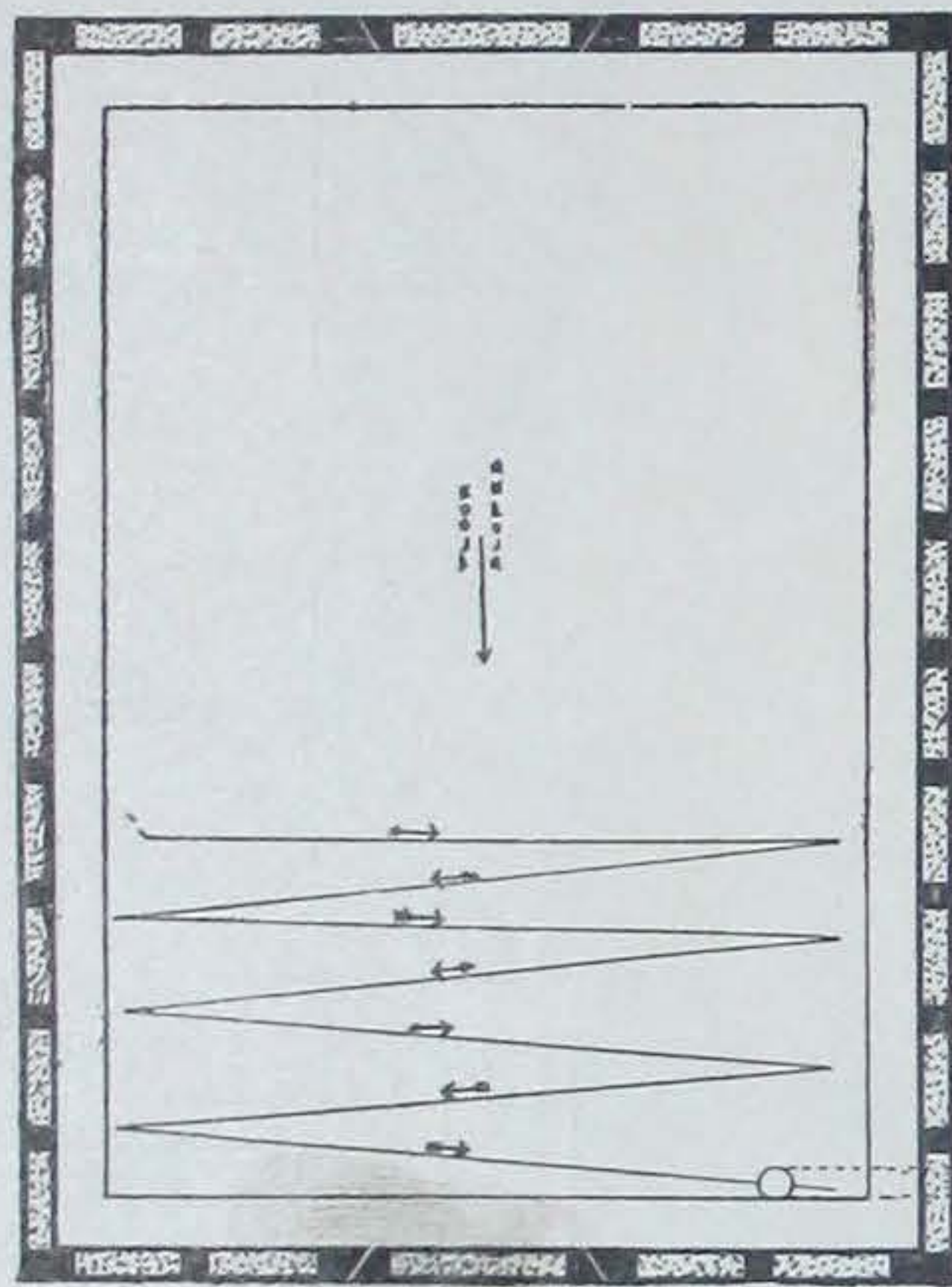
This architectural drawing shows a side elevation of a building. The structure features a gabled roof with a brick chimney on the left side. The facade is composed of several vertical sections, each containing a window. The windows are arranged in a grid-like pattern, with some sections having multiple panes. The drawing is a line sketch, showing the basic form and structure of the building.

[illegible]

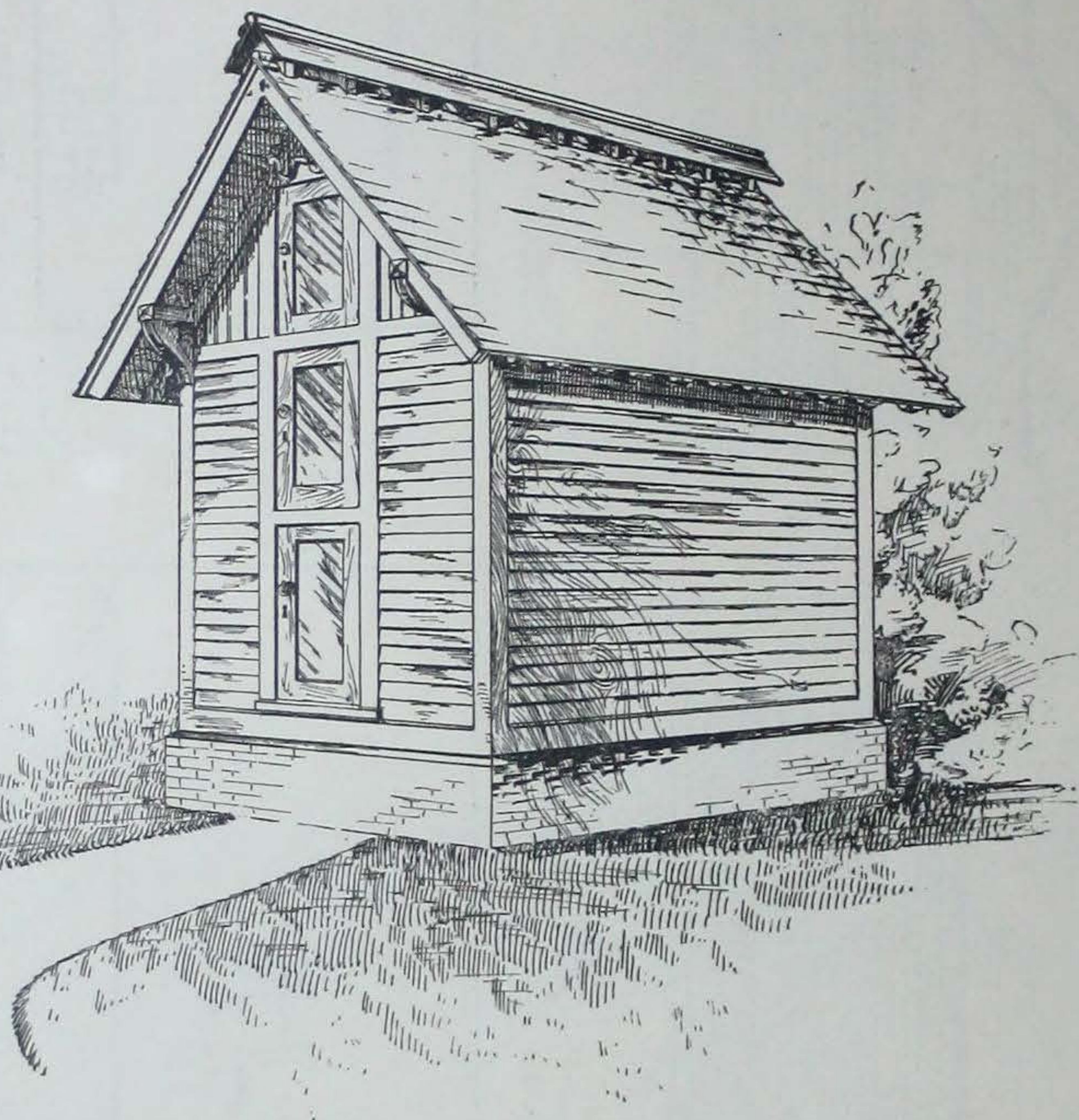
SHOPPELL'S MODERN HOUSES

See description on page 289.

ICE HOUSE



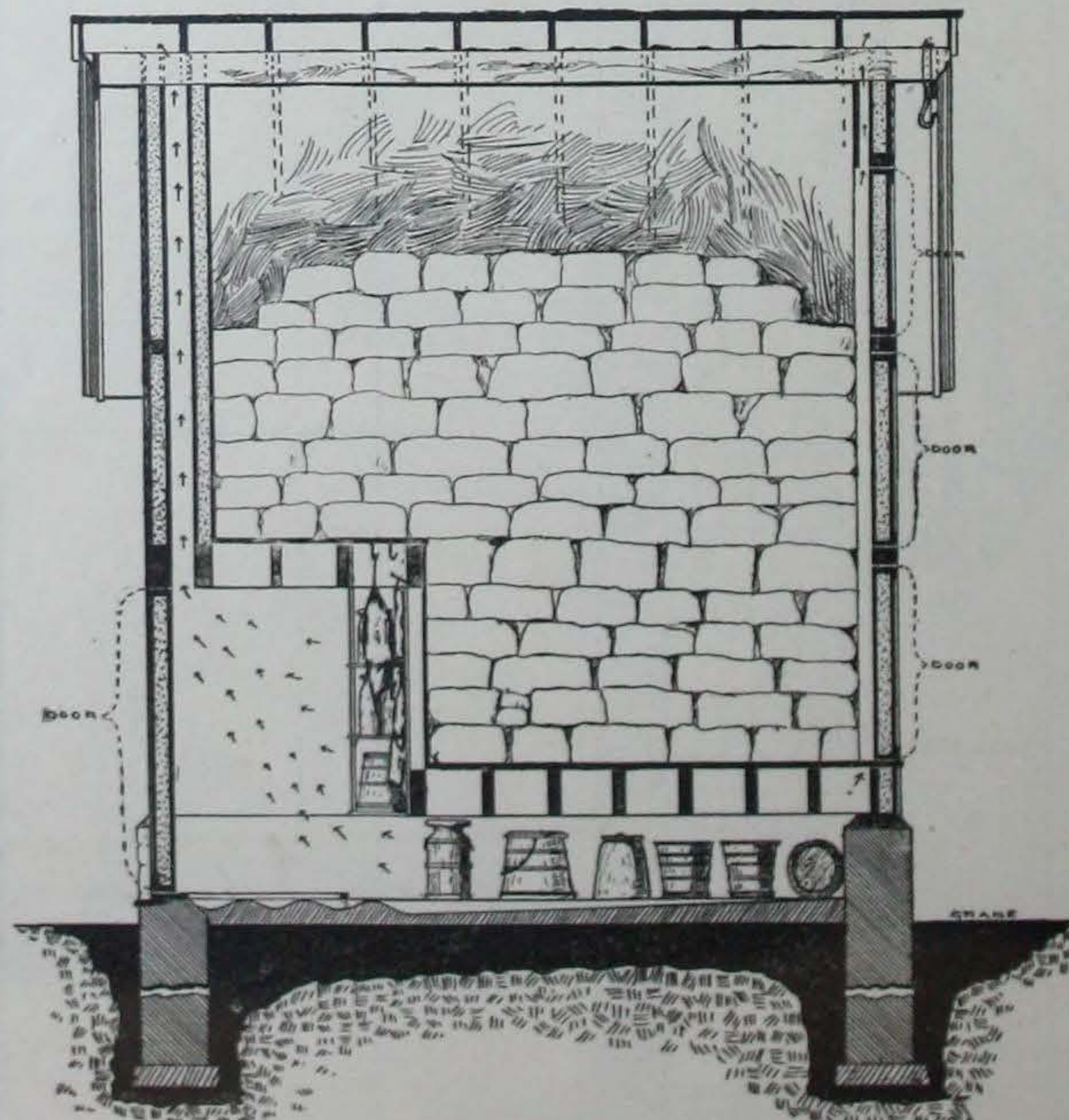
PLAN



PERSPECTIVE VIEW



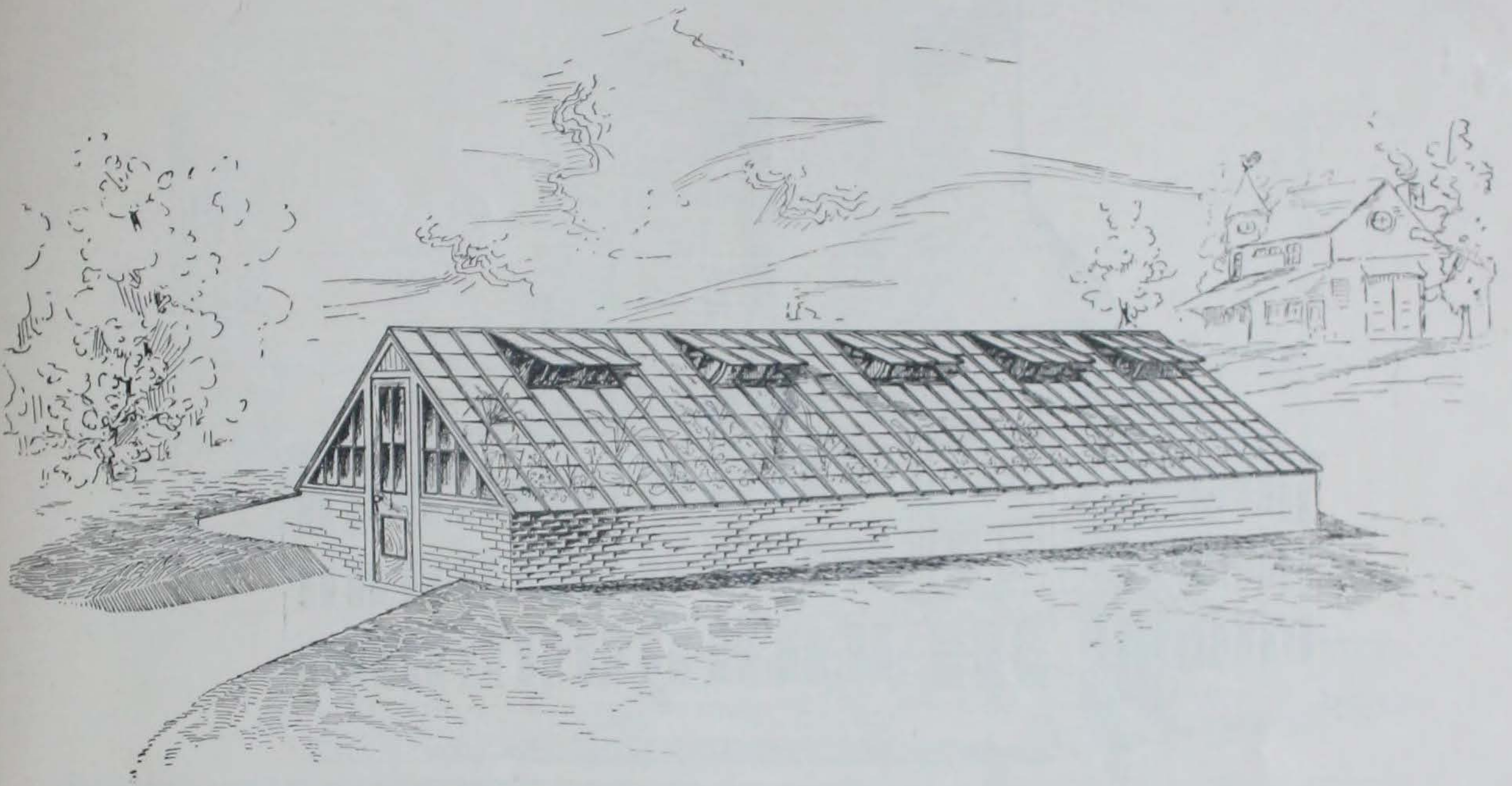
CROSS SECTION



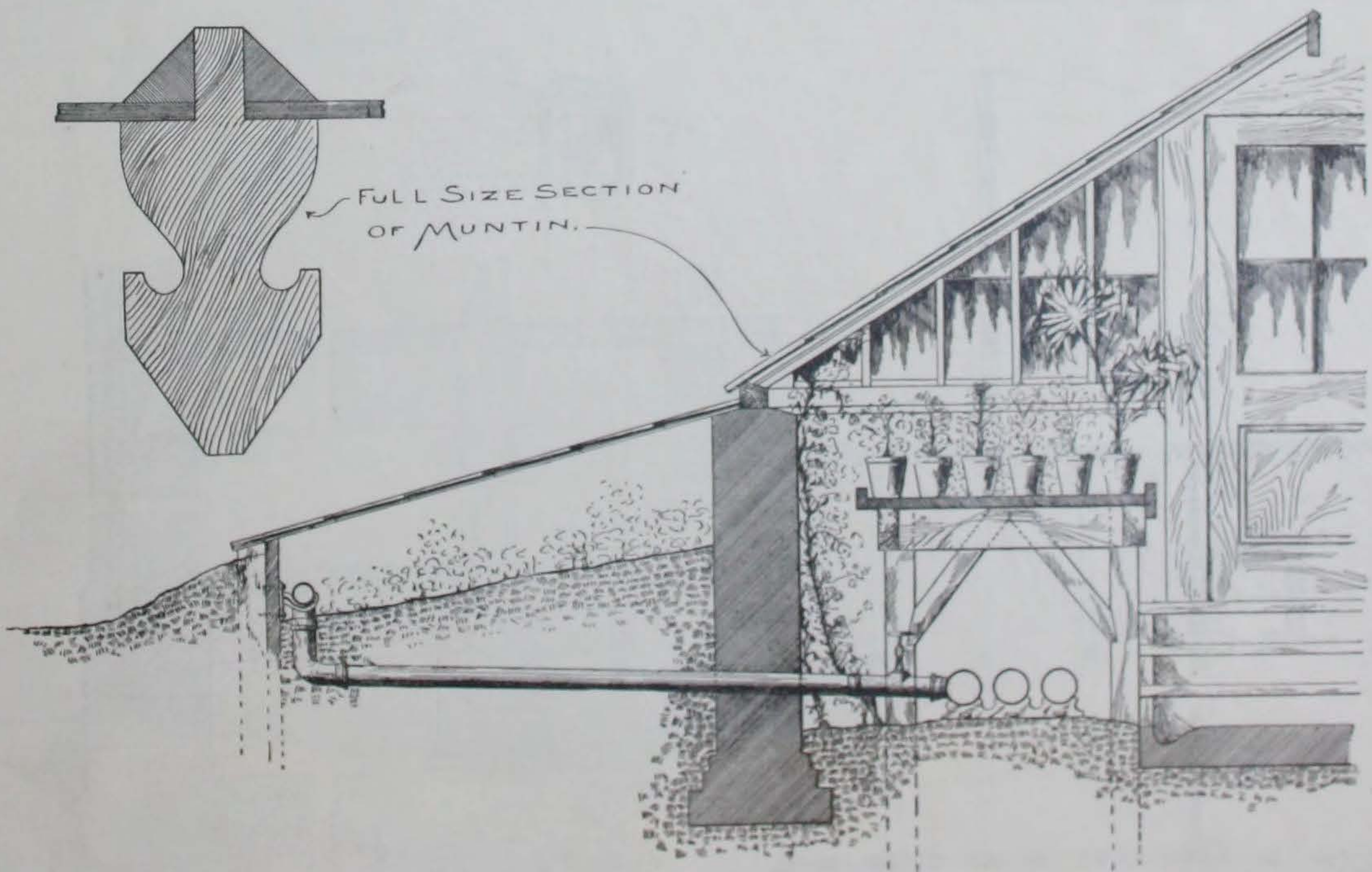
LONGITUDINAL SECTION

See description on page 289.

GREENHOUSE



PERSPECTIVE VIEW

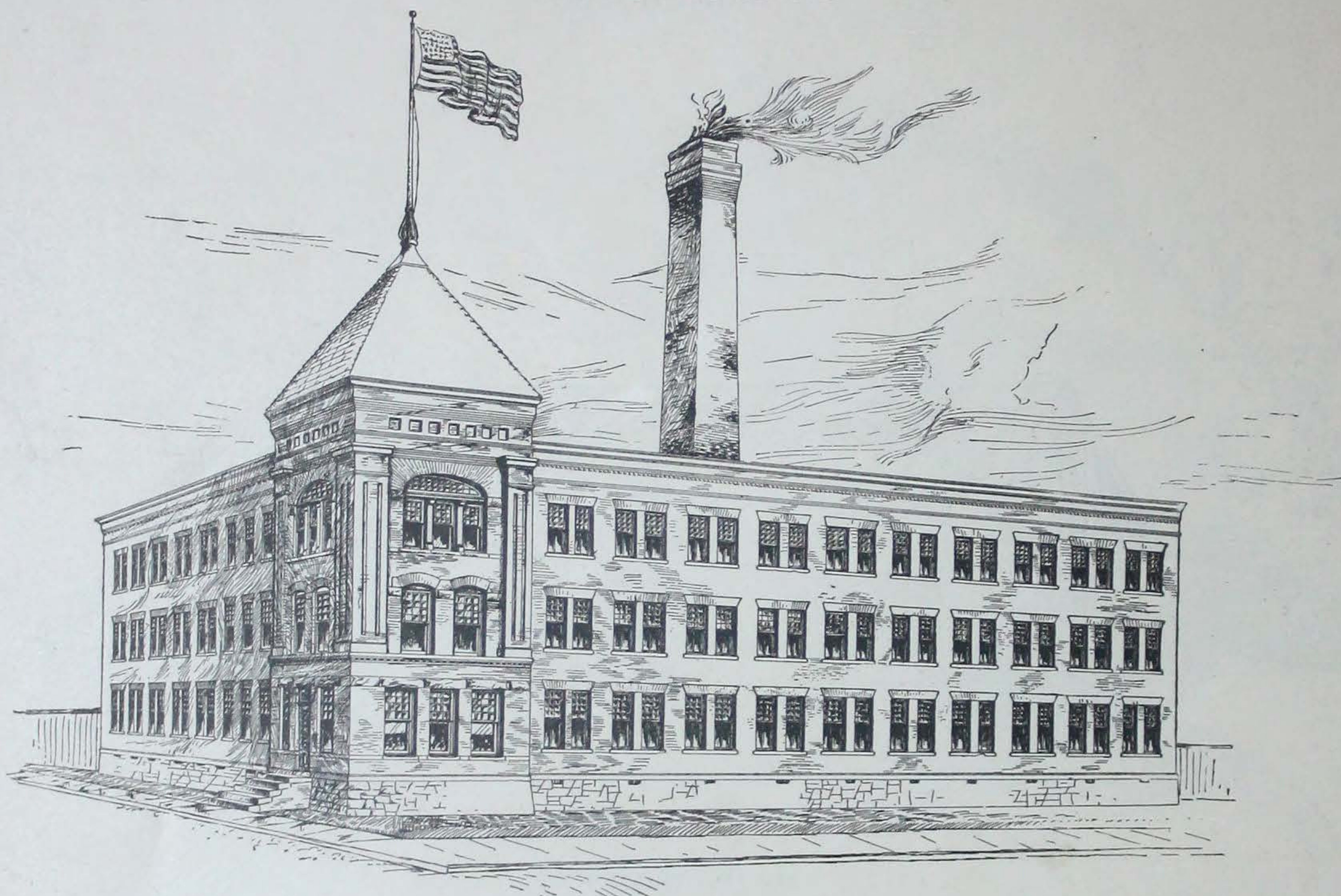


CROSS SECTIONAL VIEW

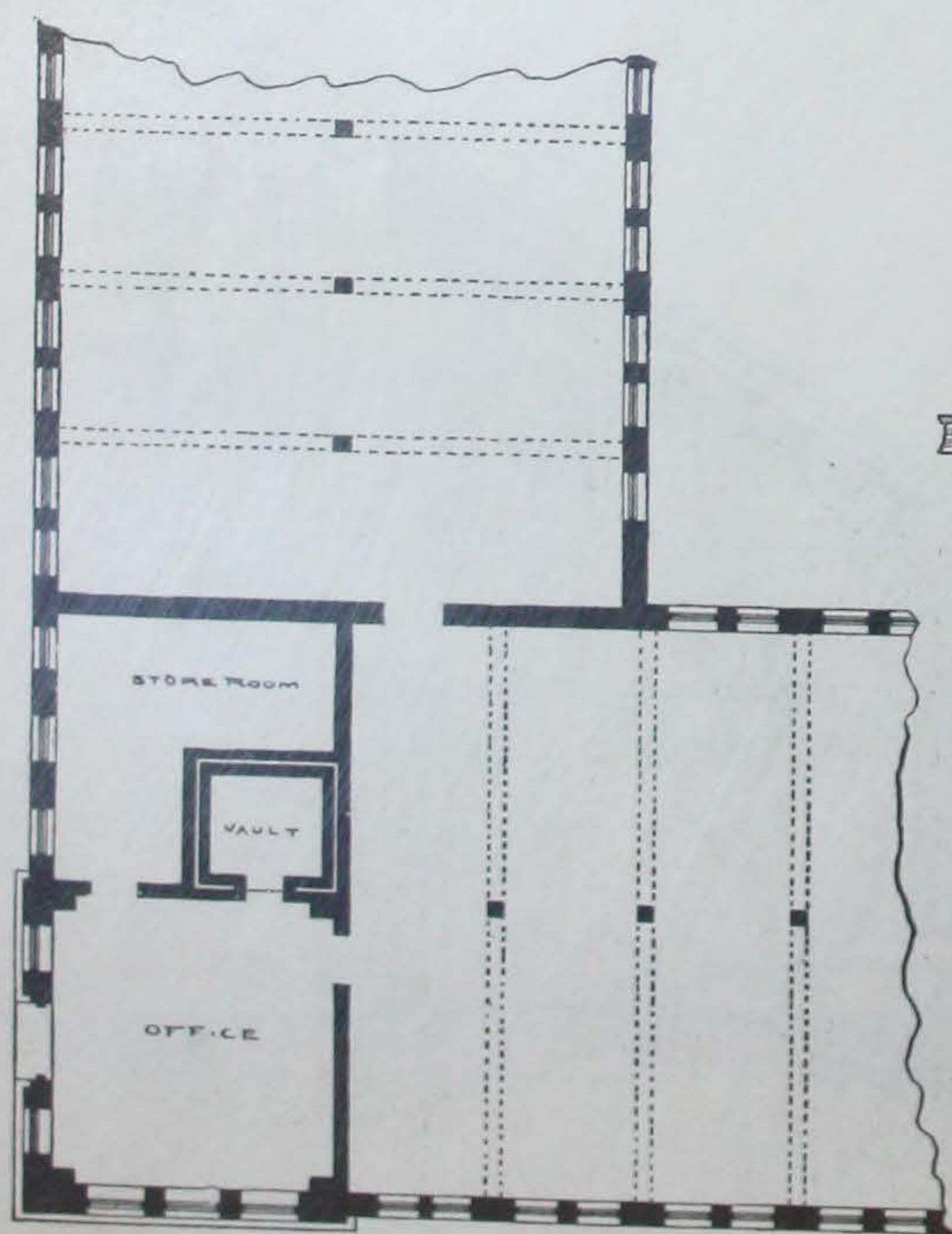
SHOPPELL'S MODERN HOUSES

See description on page 290.

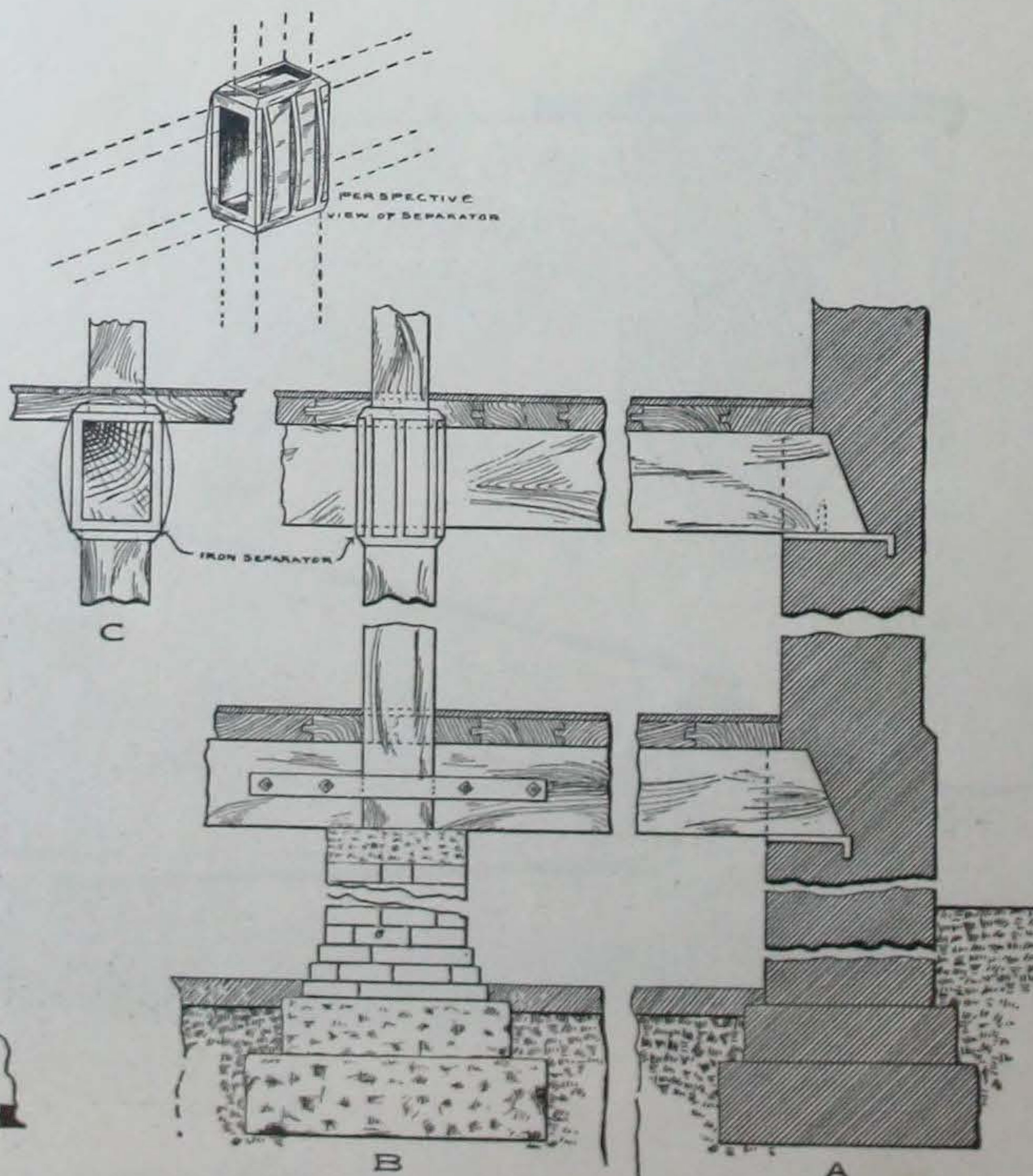
MILL OR FACTORY



PERSPECTIVE VIEW



PLAN



DETAILS

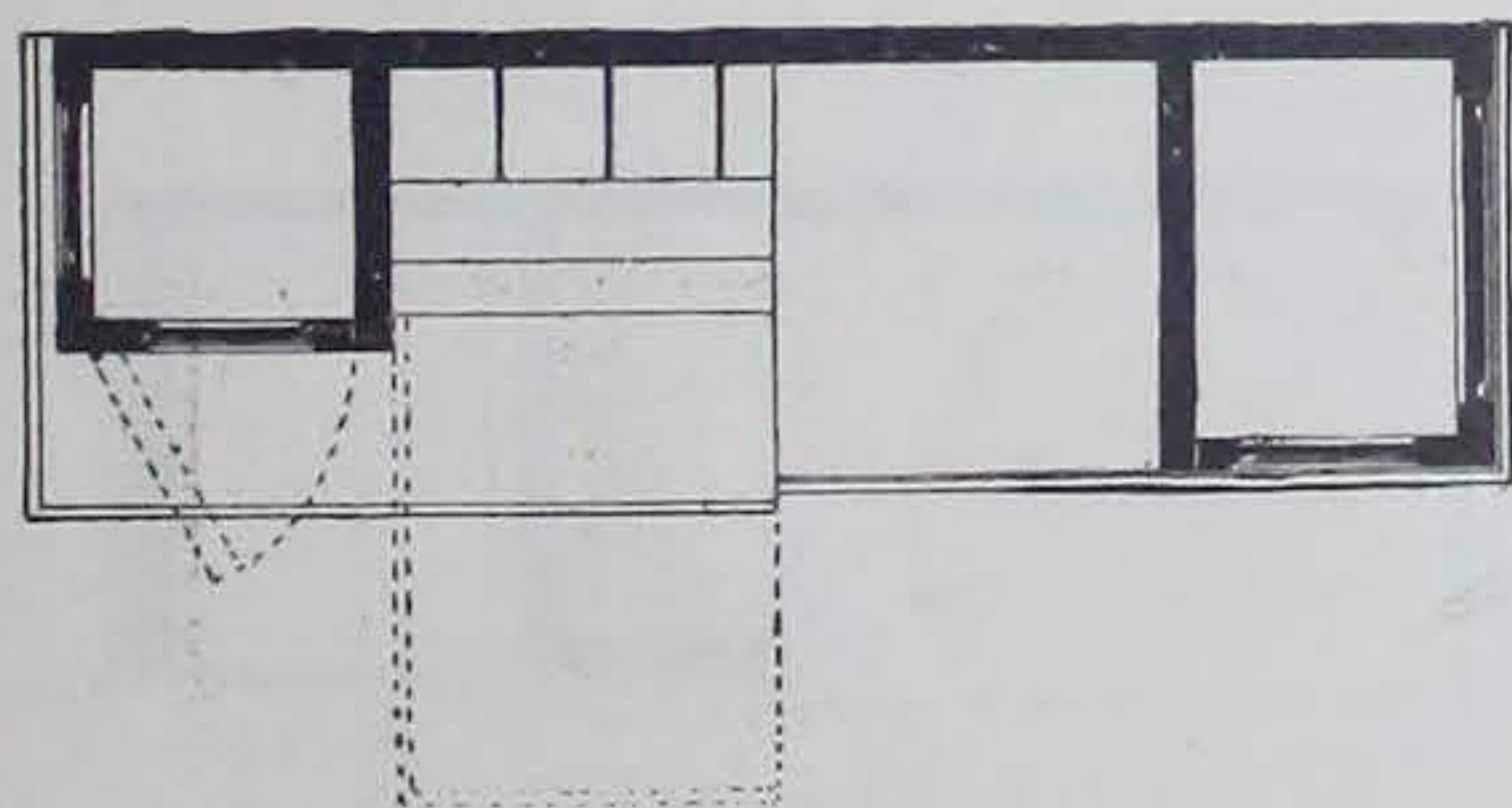


SIDE

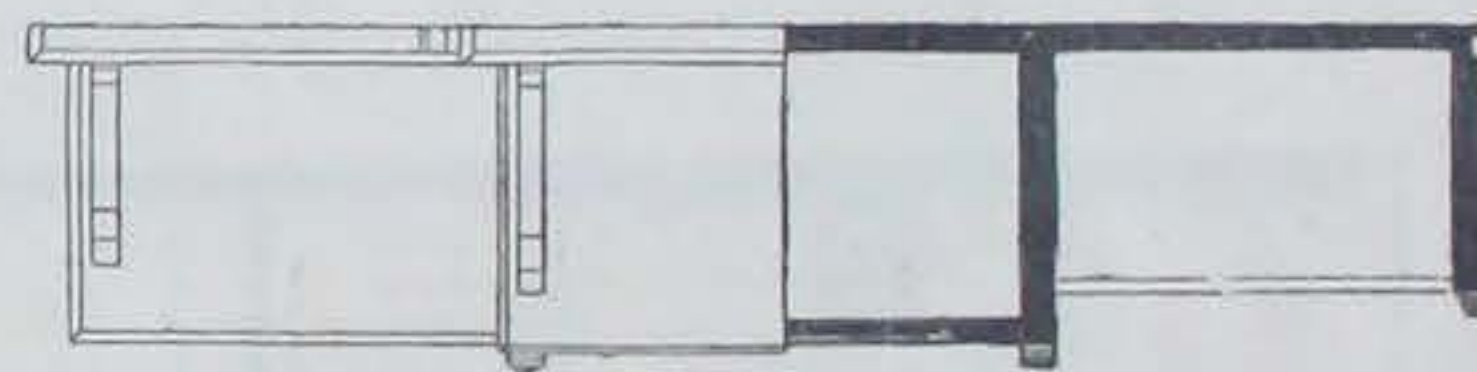
FRONT ELEVATION

SECTION

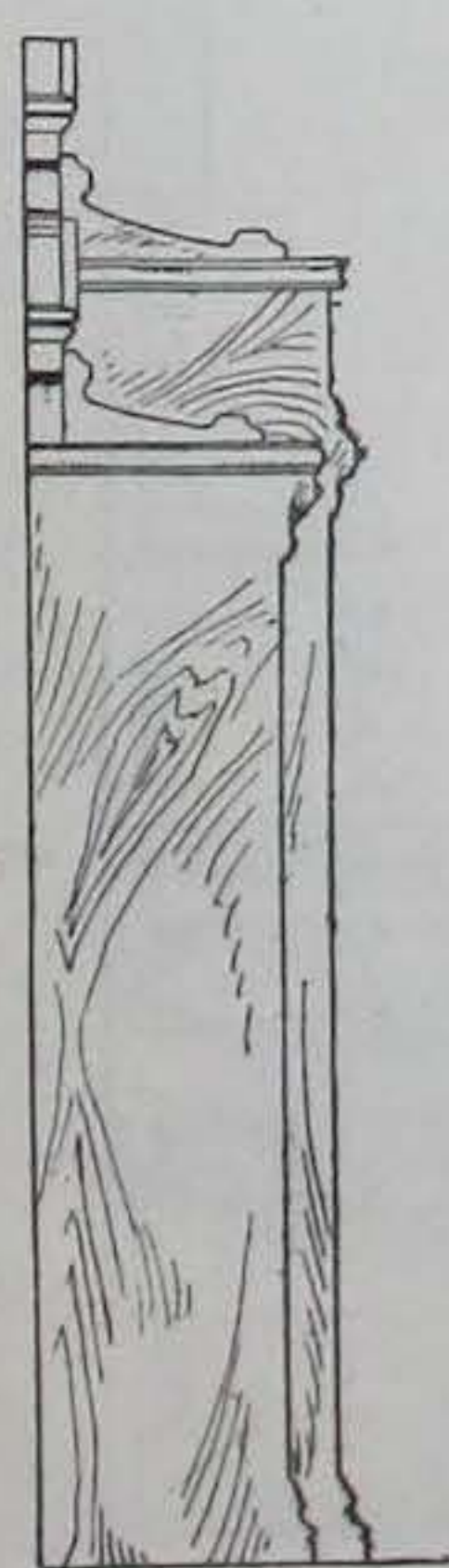
BOOKCASE No. 1



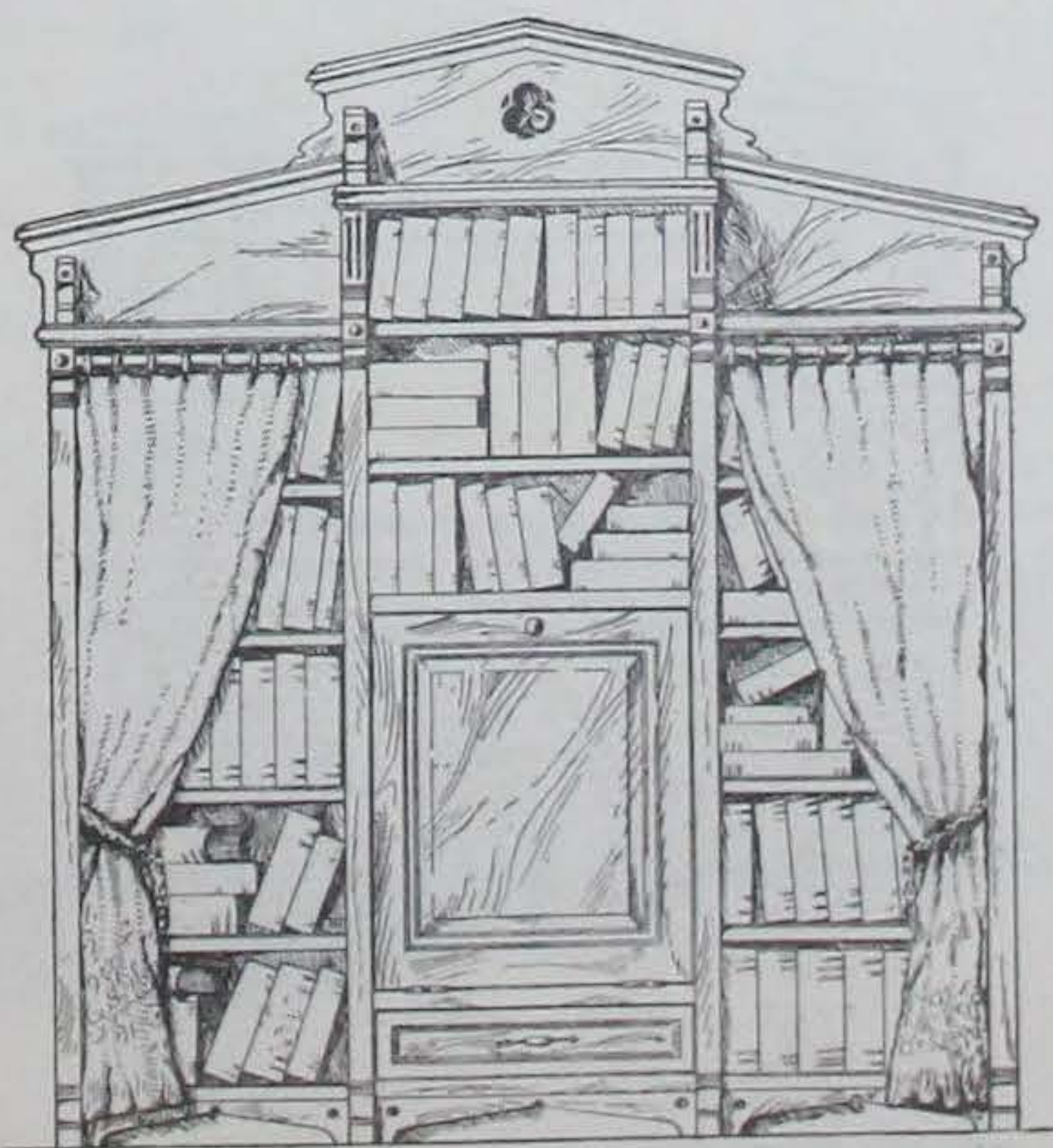
PLAN OF NO. 1



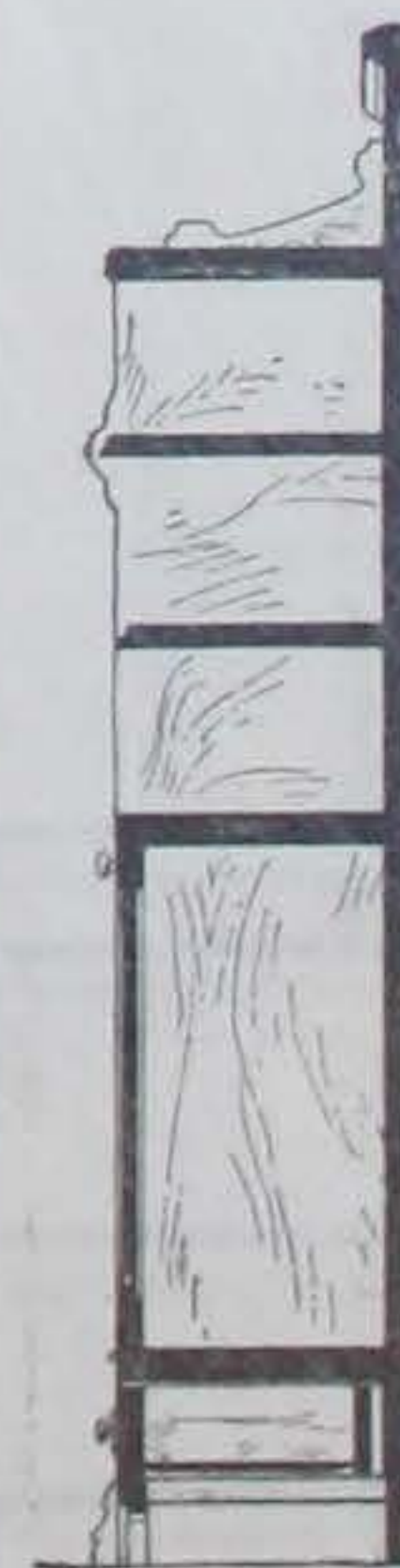
PLAN OF NO. 2



SIDE



FRONT ELEVATION

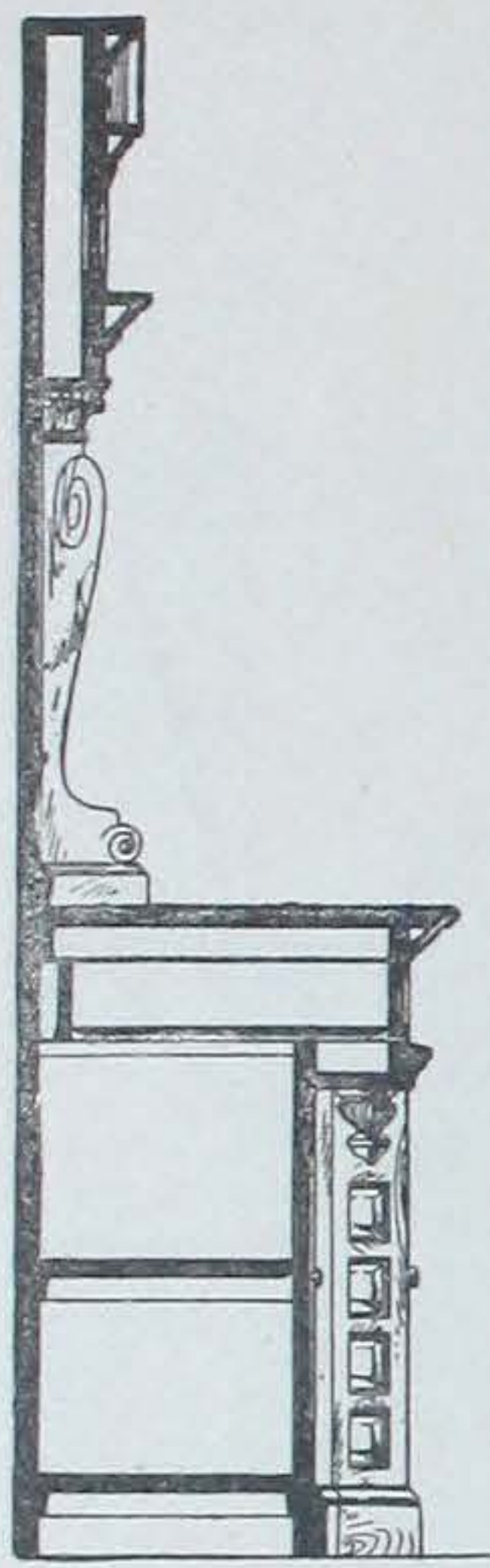


SECTION

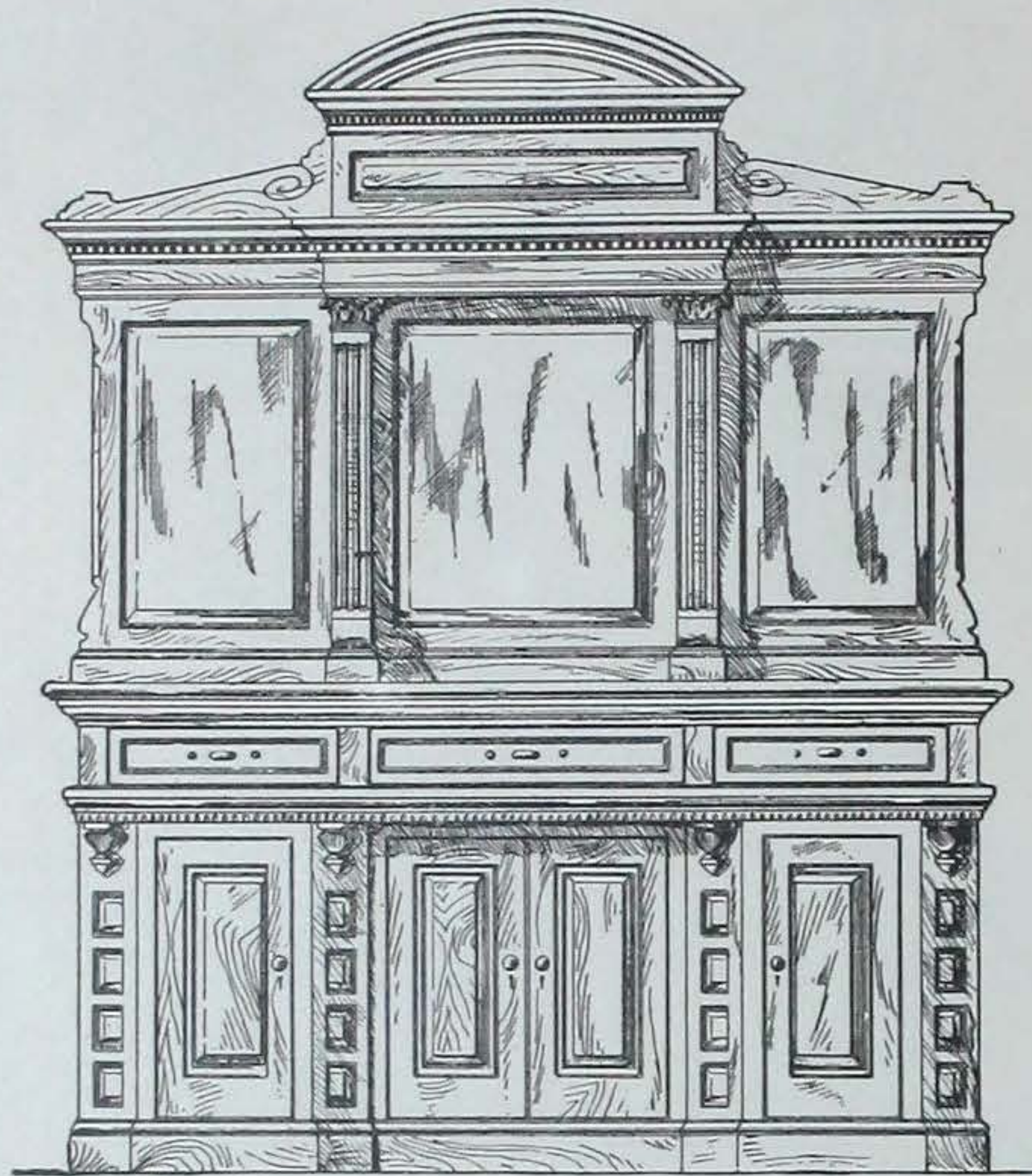
BOOKCASE No. 2

SHOPPELL'S MODERN HOUSES

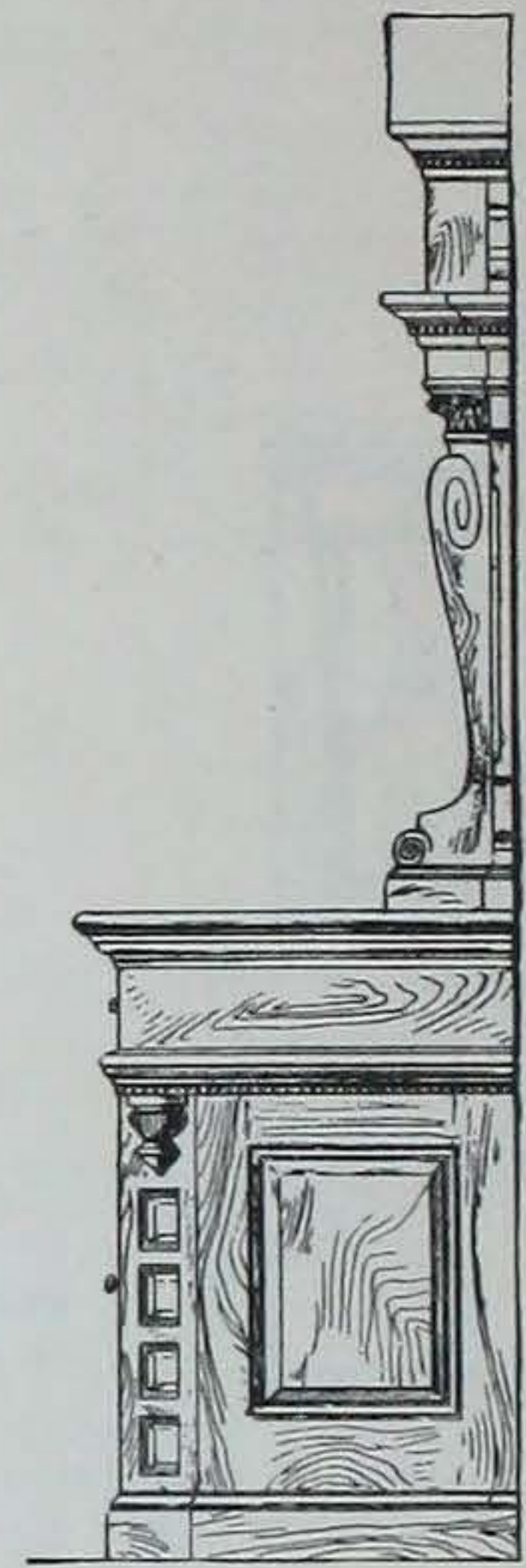
See description on page 290.



SECTION

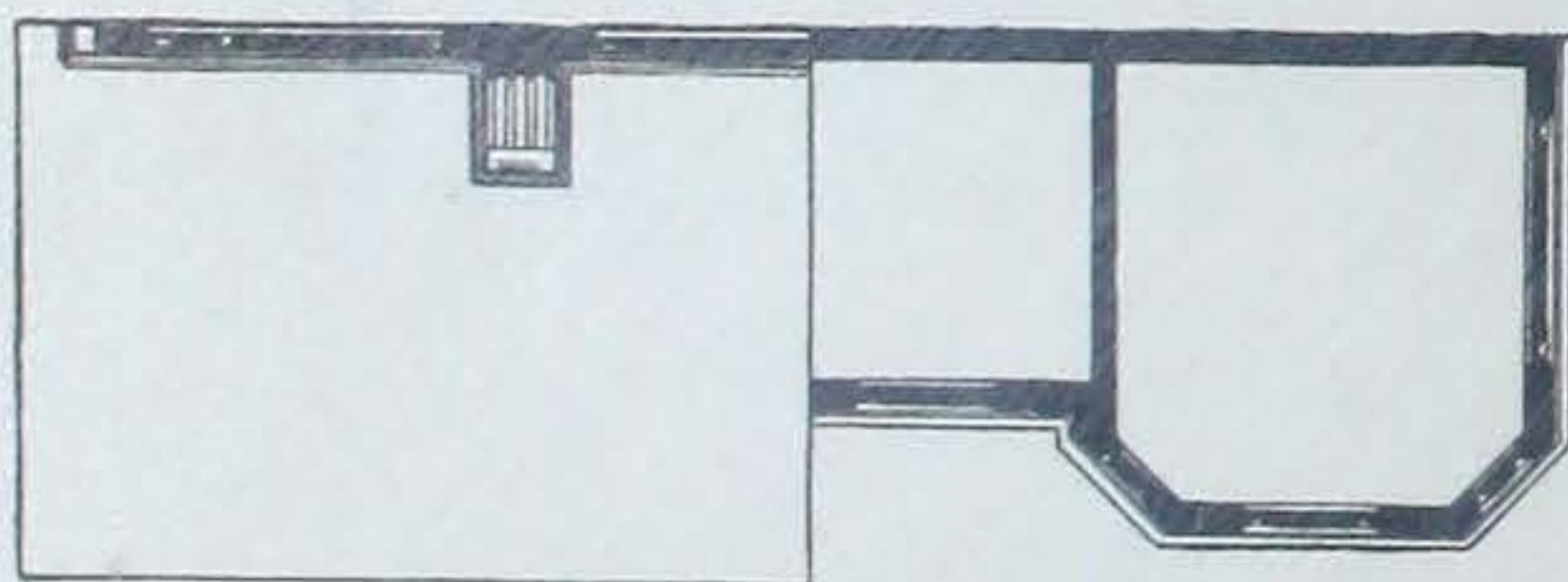


FRONT ELEVATION

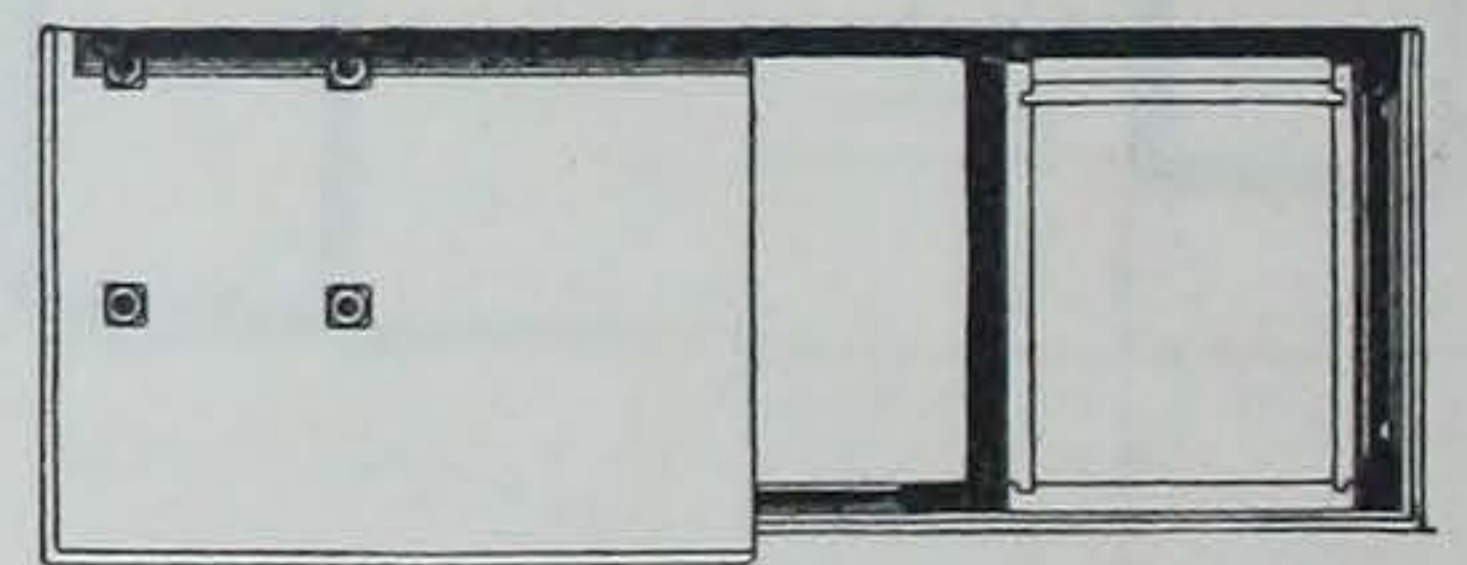


SIDE

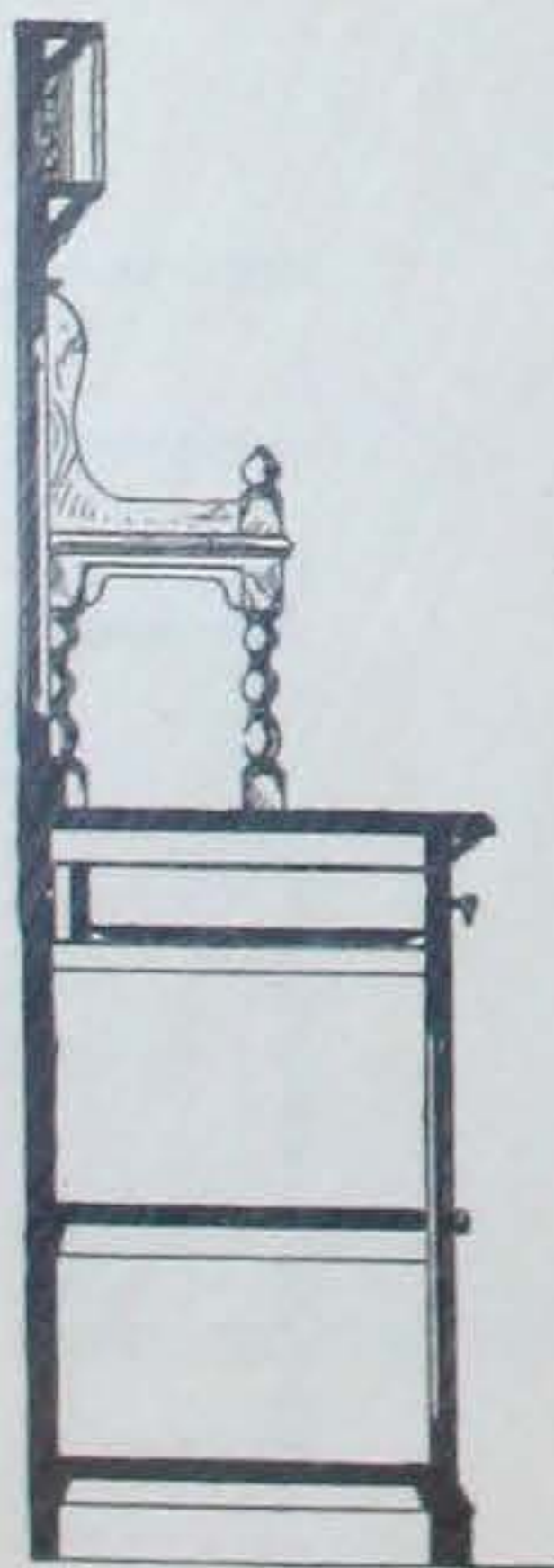
SIDEBOARD No. 1



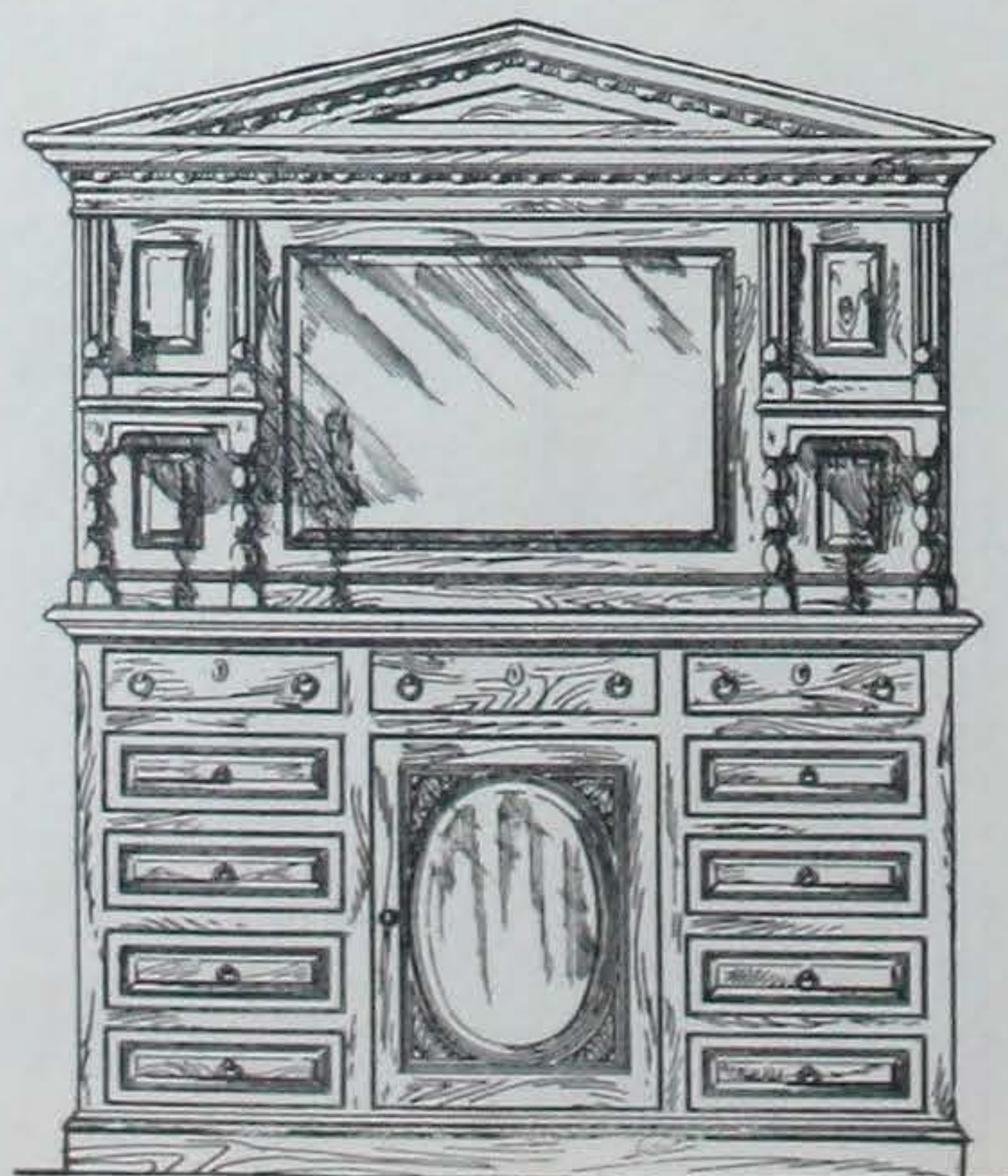
PLAN OF NO. 1



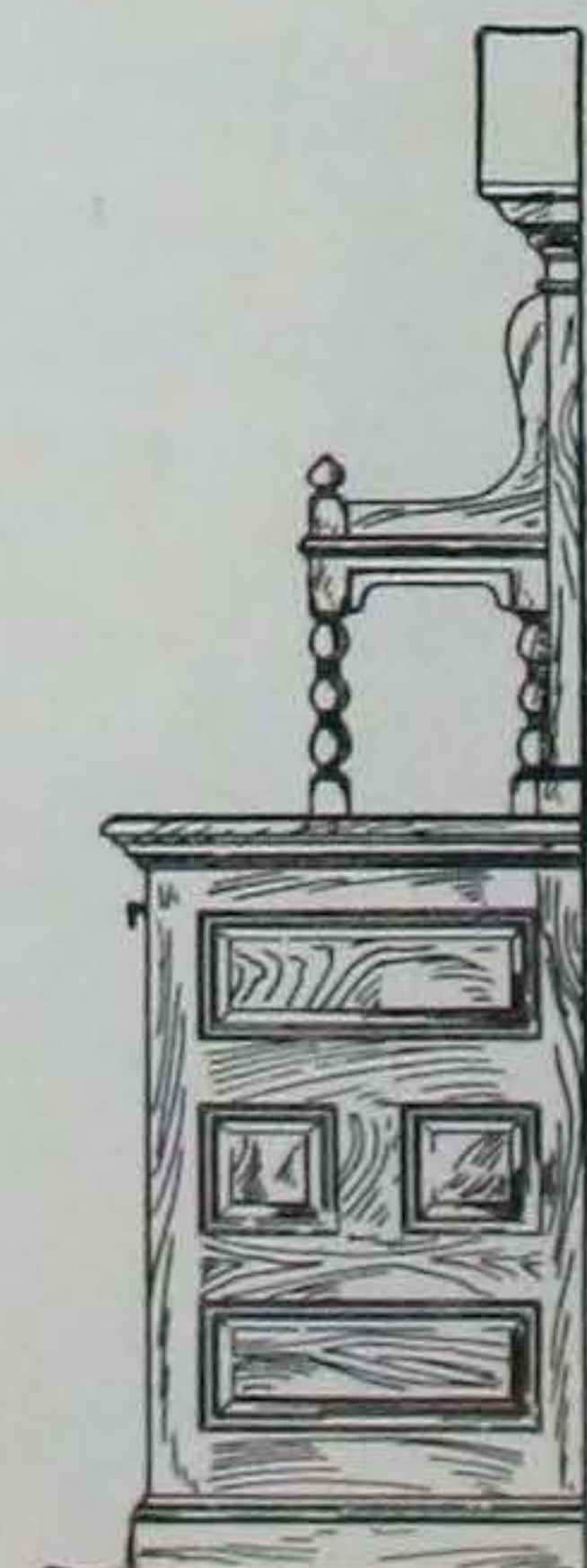
PLAN OF NO. 2



SECTION



FRONT ELEVATION

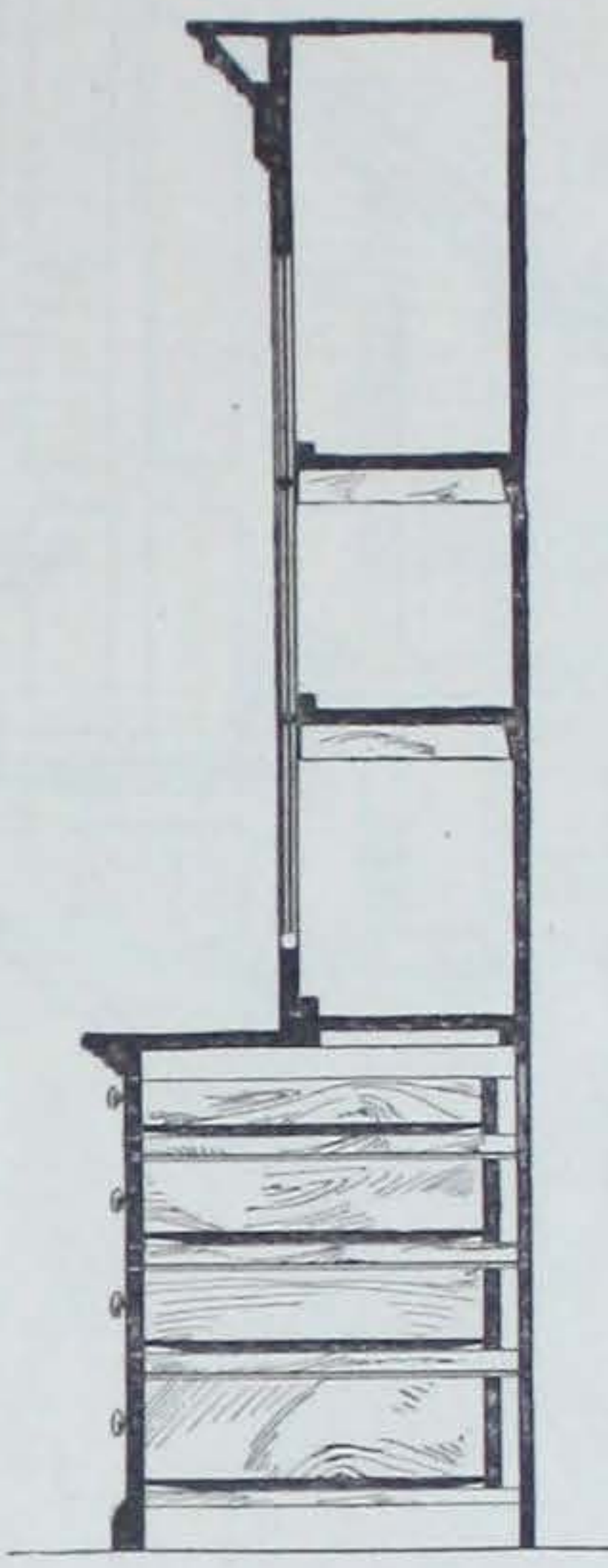


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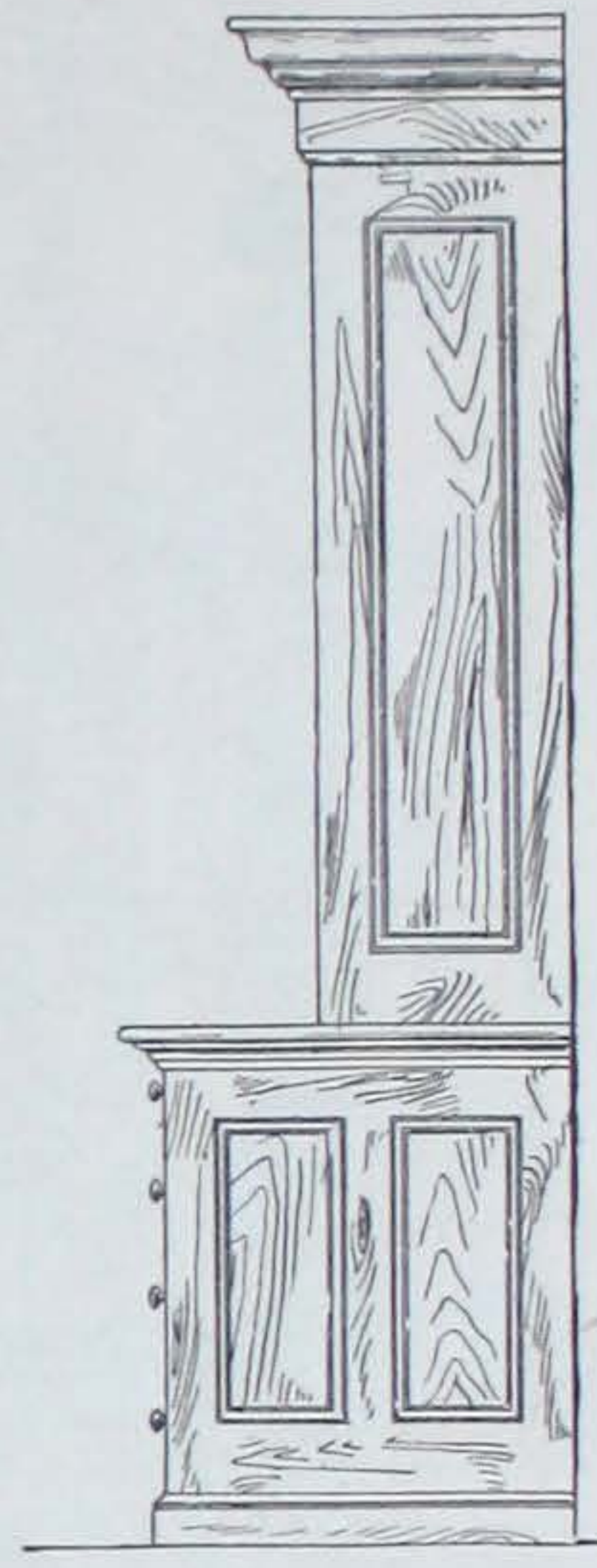
SIDEBOARD No. 2



FRONT



SECTION

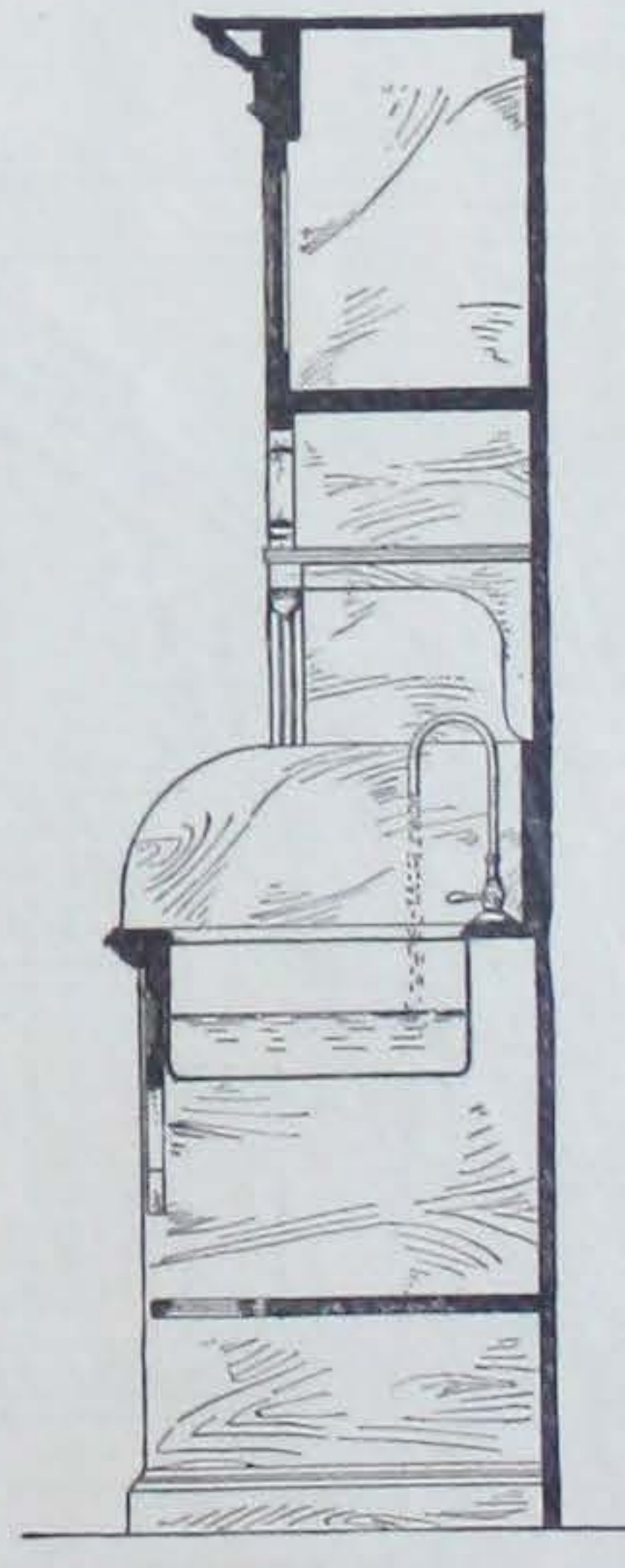


SIDE

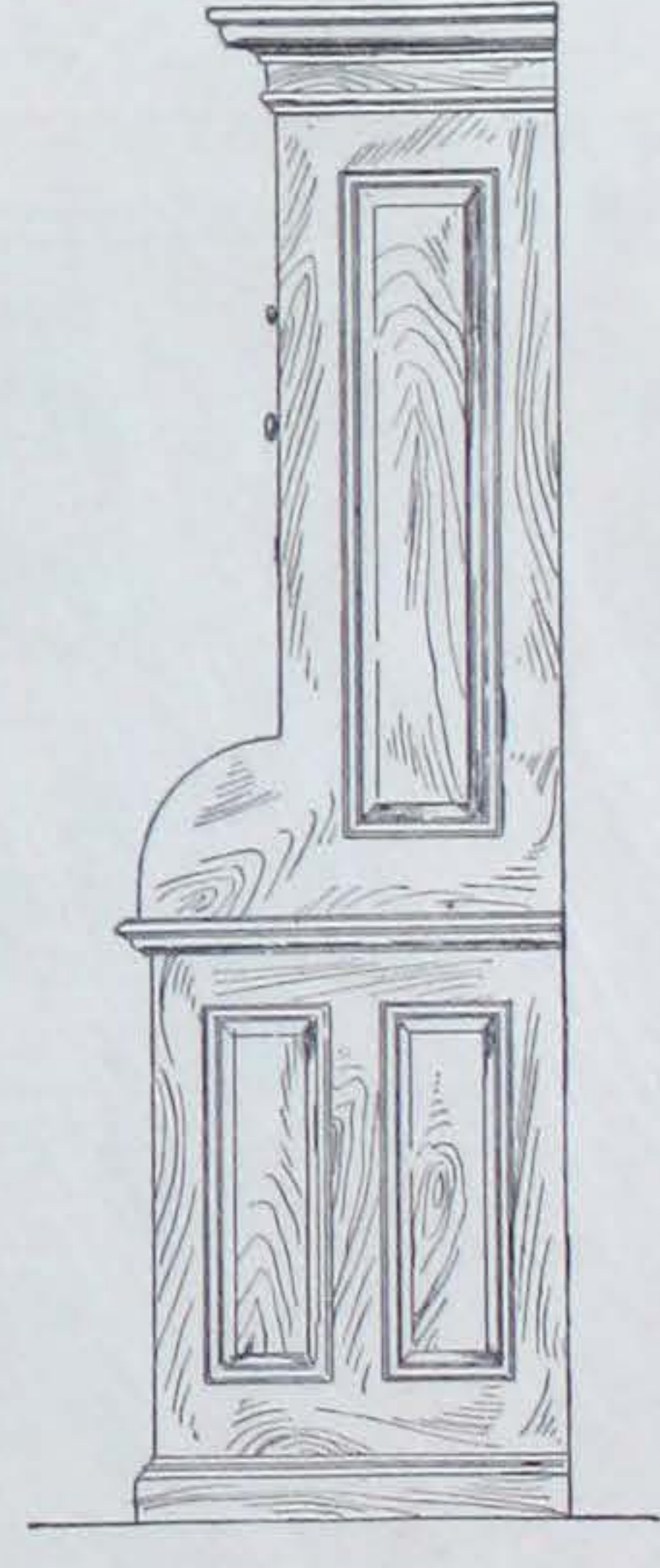
KITCHEN DRESSER



FRONT

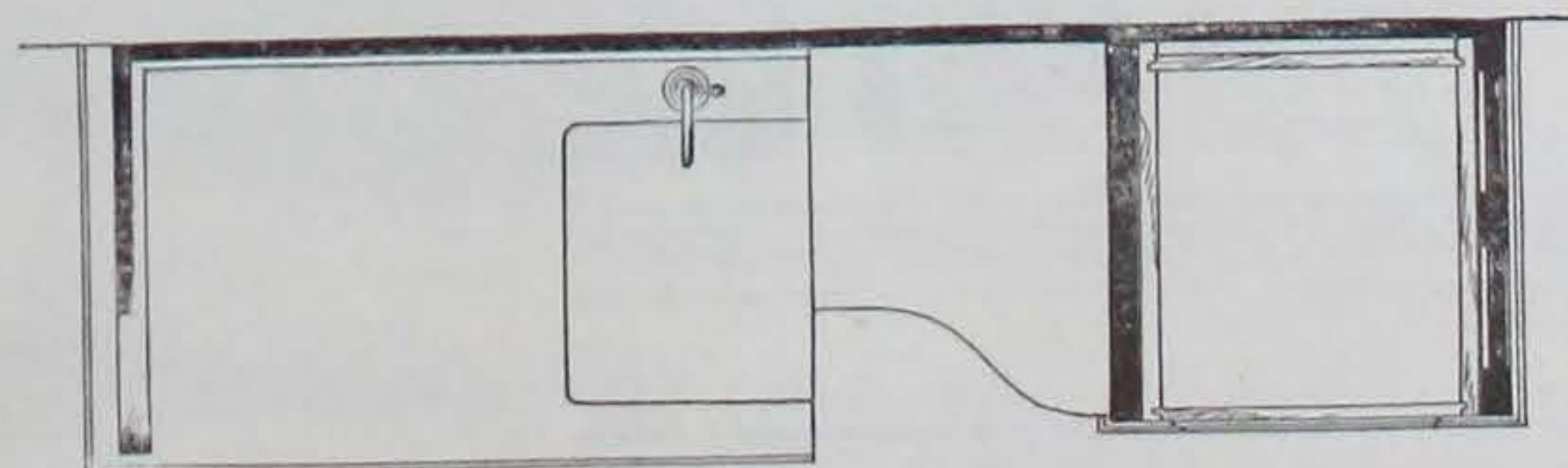


SECTION



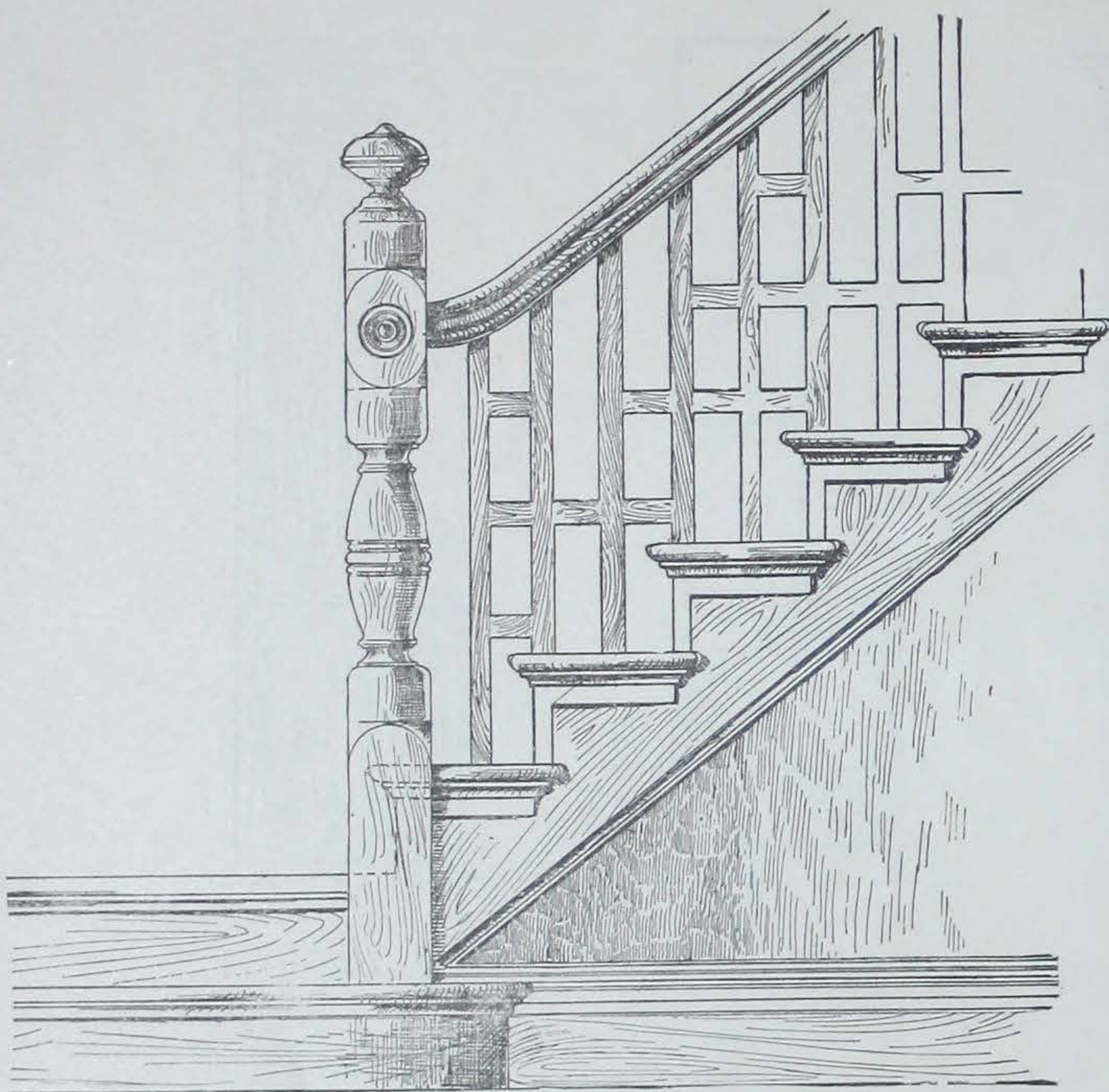
SIDE

PANTRY DRESSER



PLAN OF PANTRY DRESSER

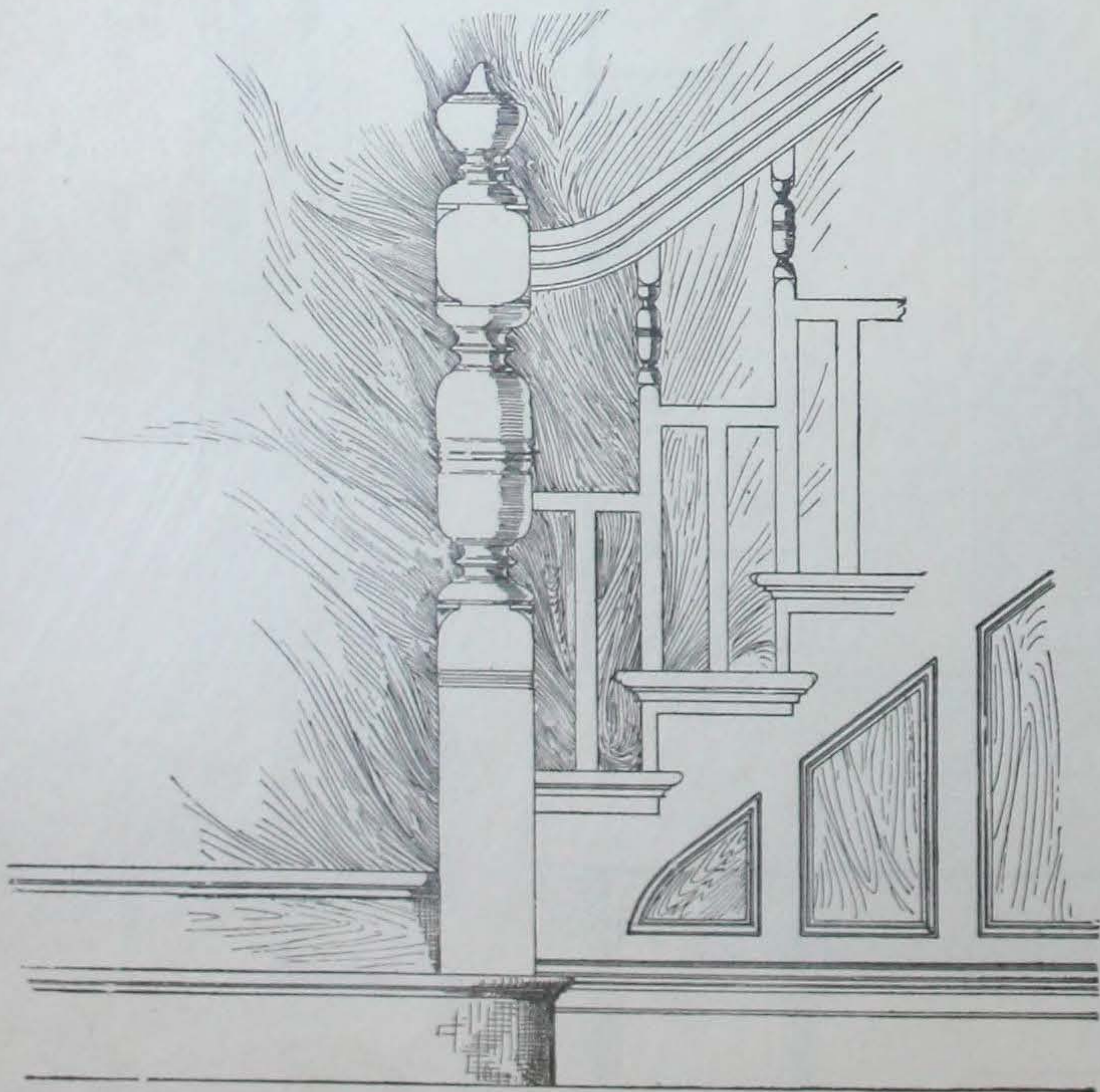
These are given as examples of good styles, without further descriptions or estimates.



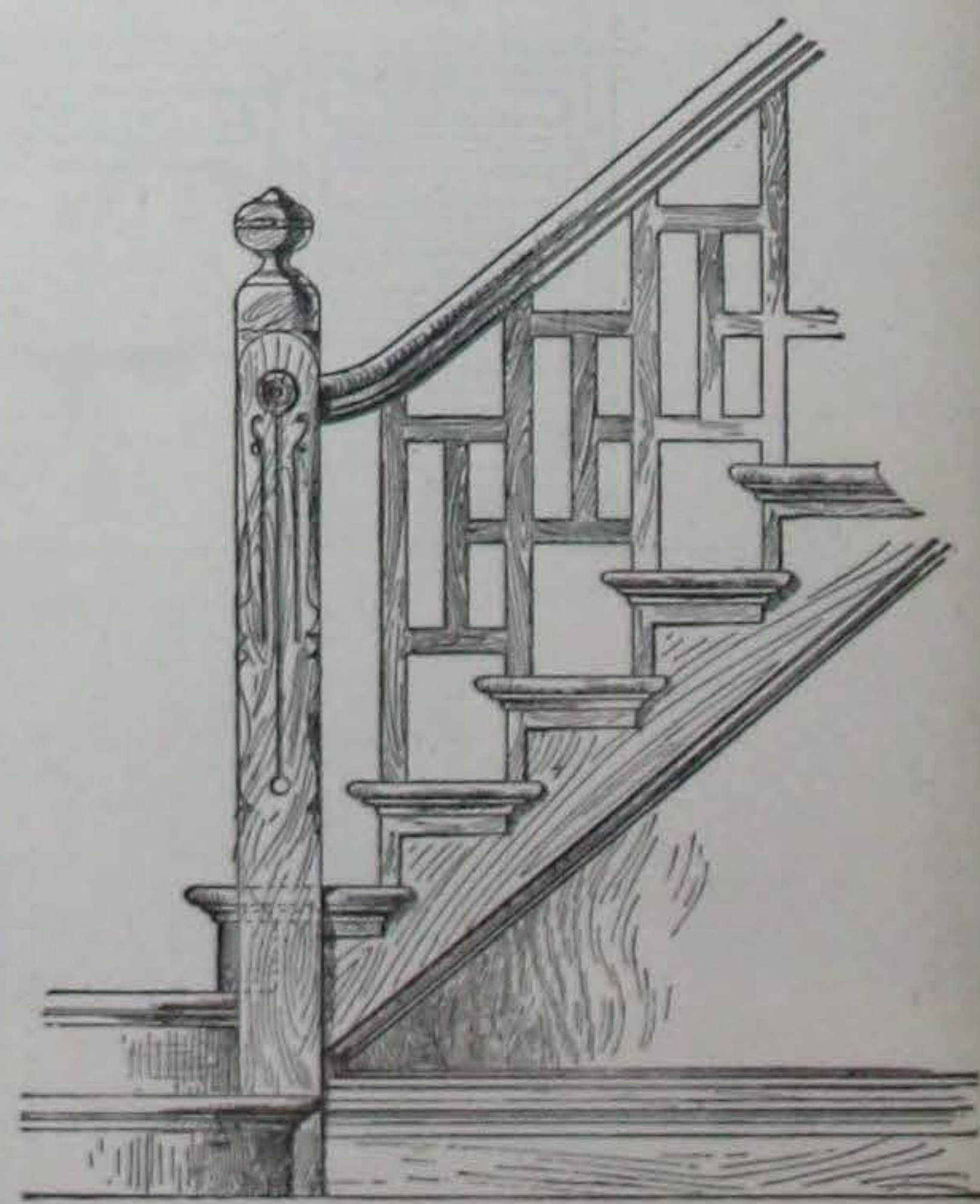
STAIR NO. 1



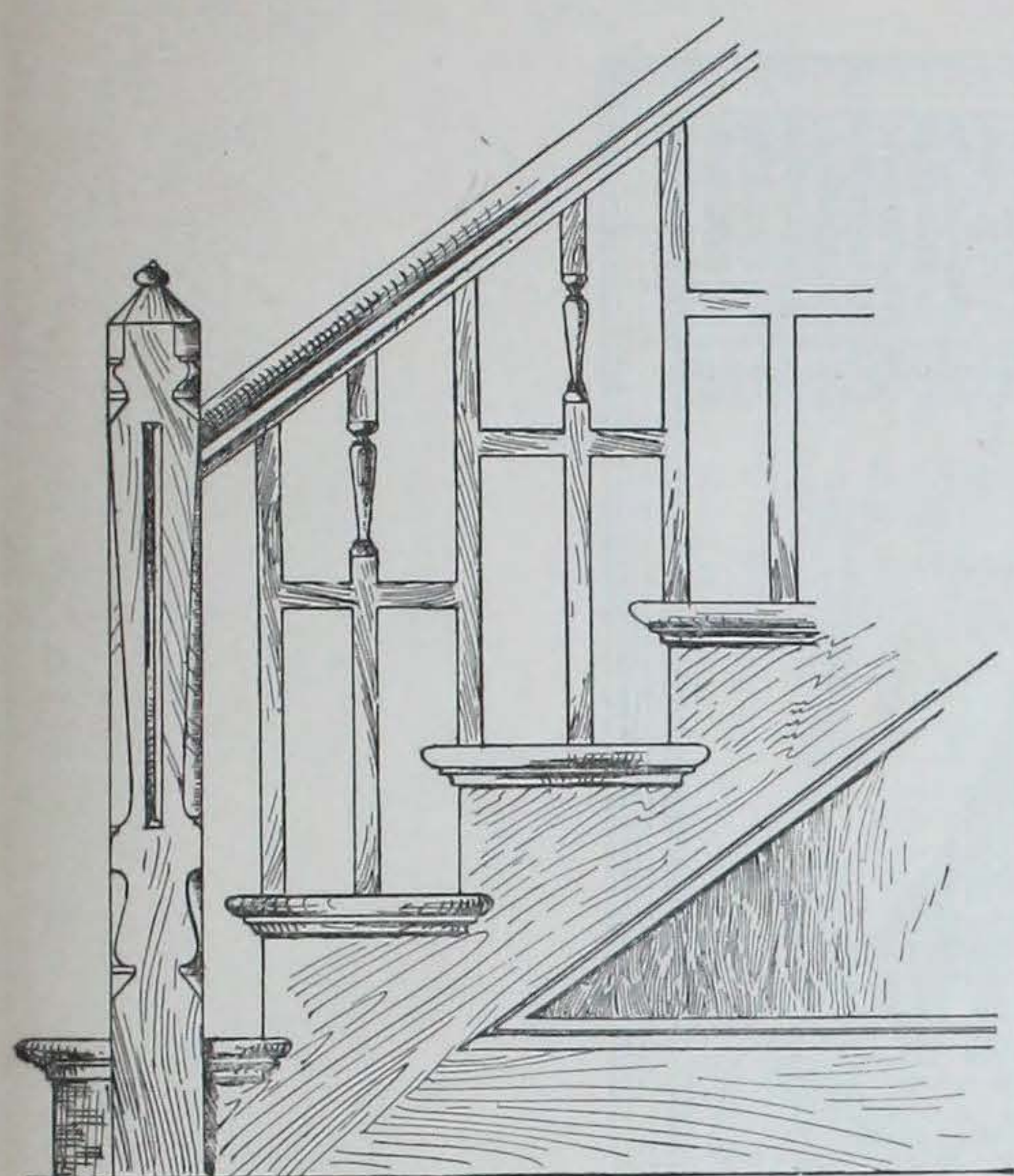
STAIR NO. 2



STAIR NO. 3



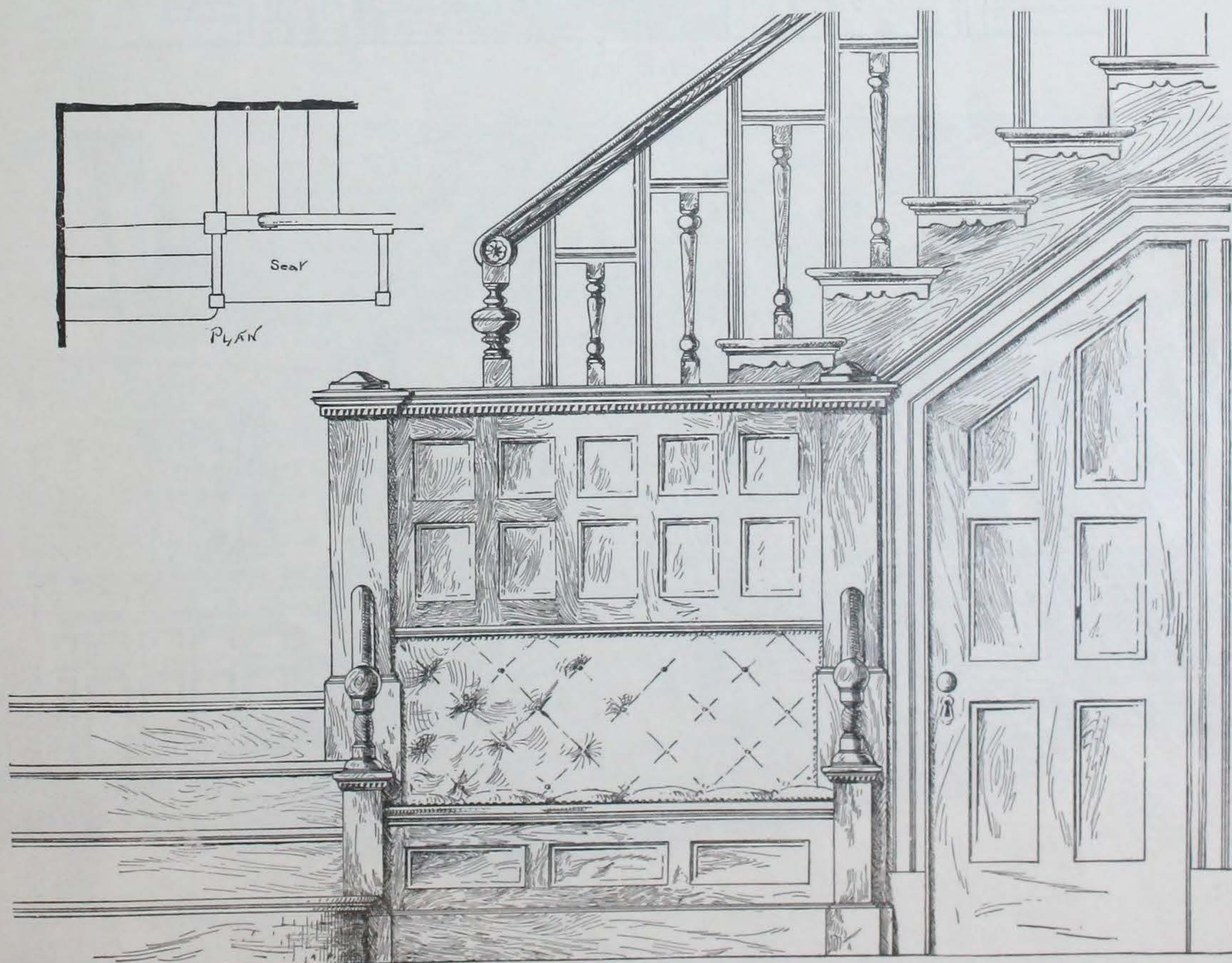
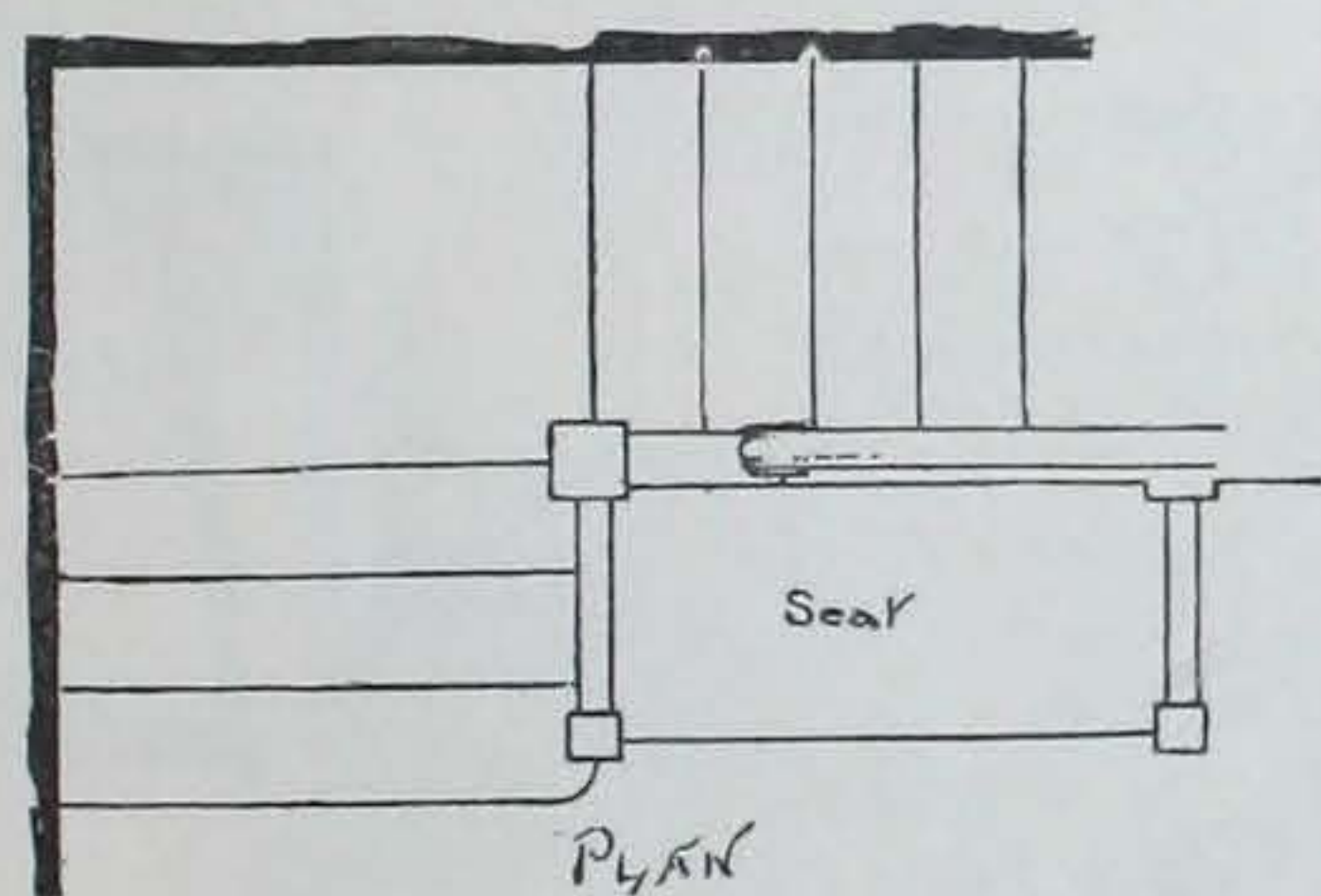
STAIR NO. 4



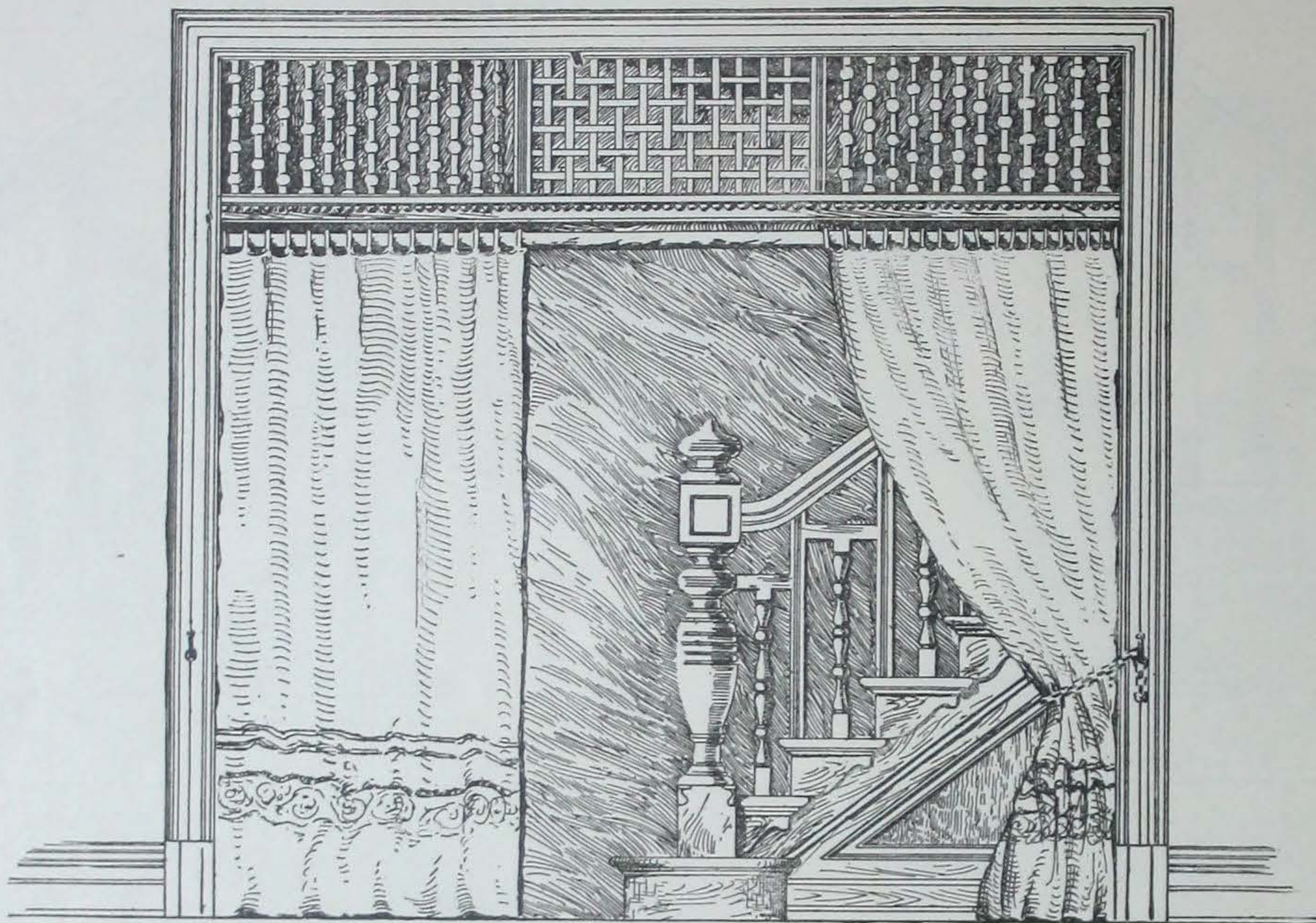
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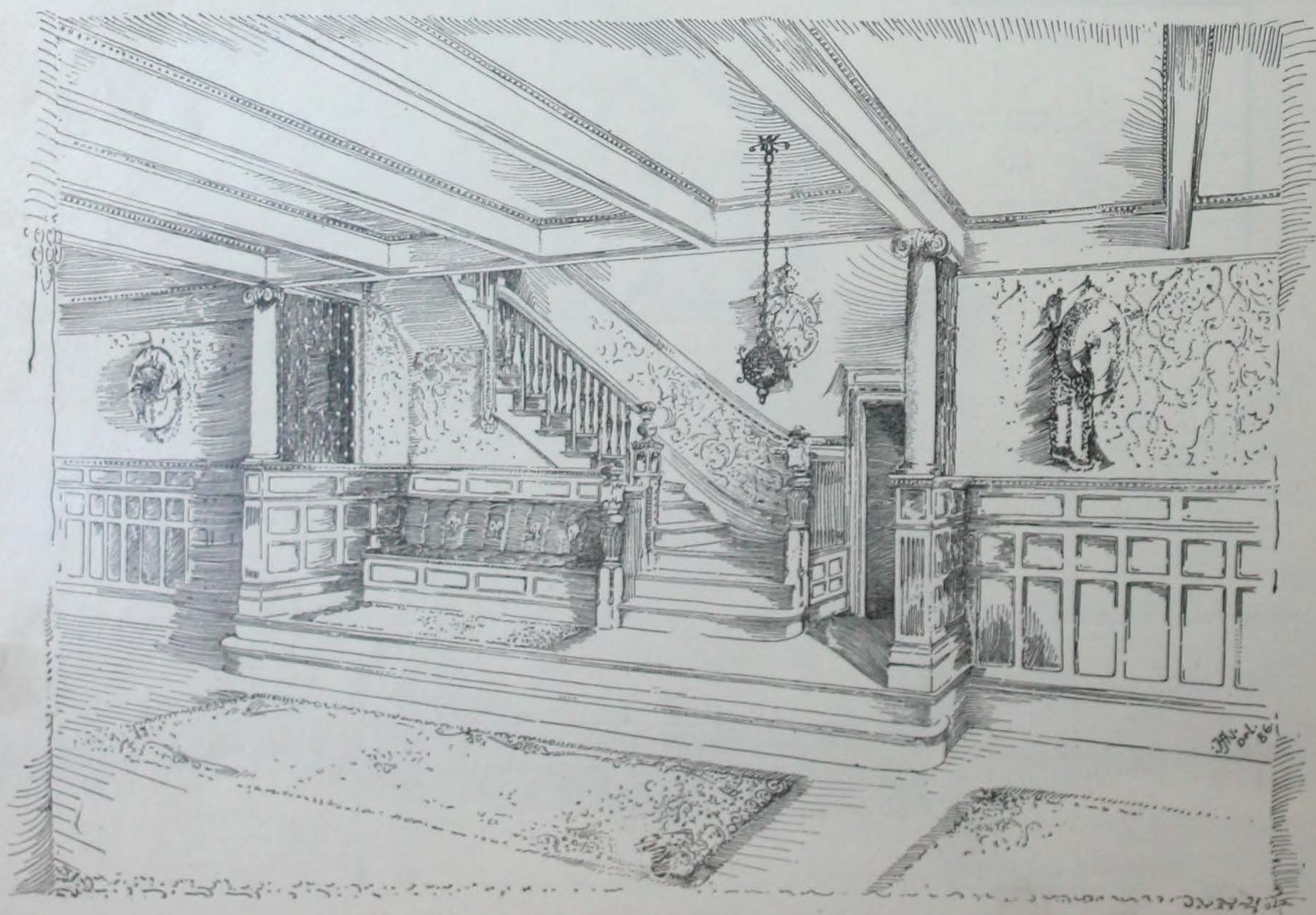
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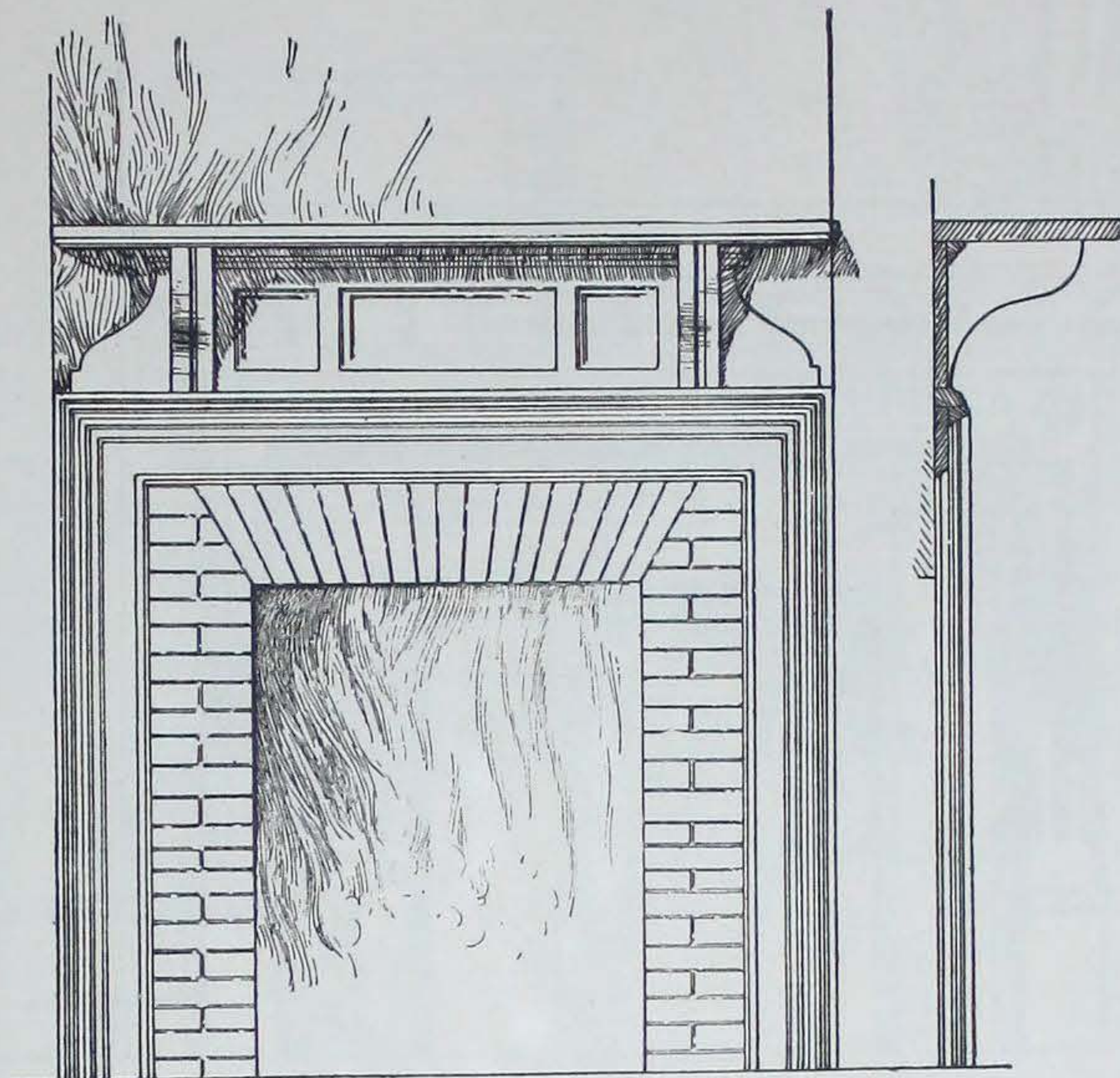


STAIR NO. 7

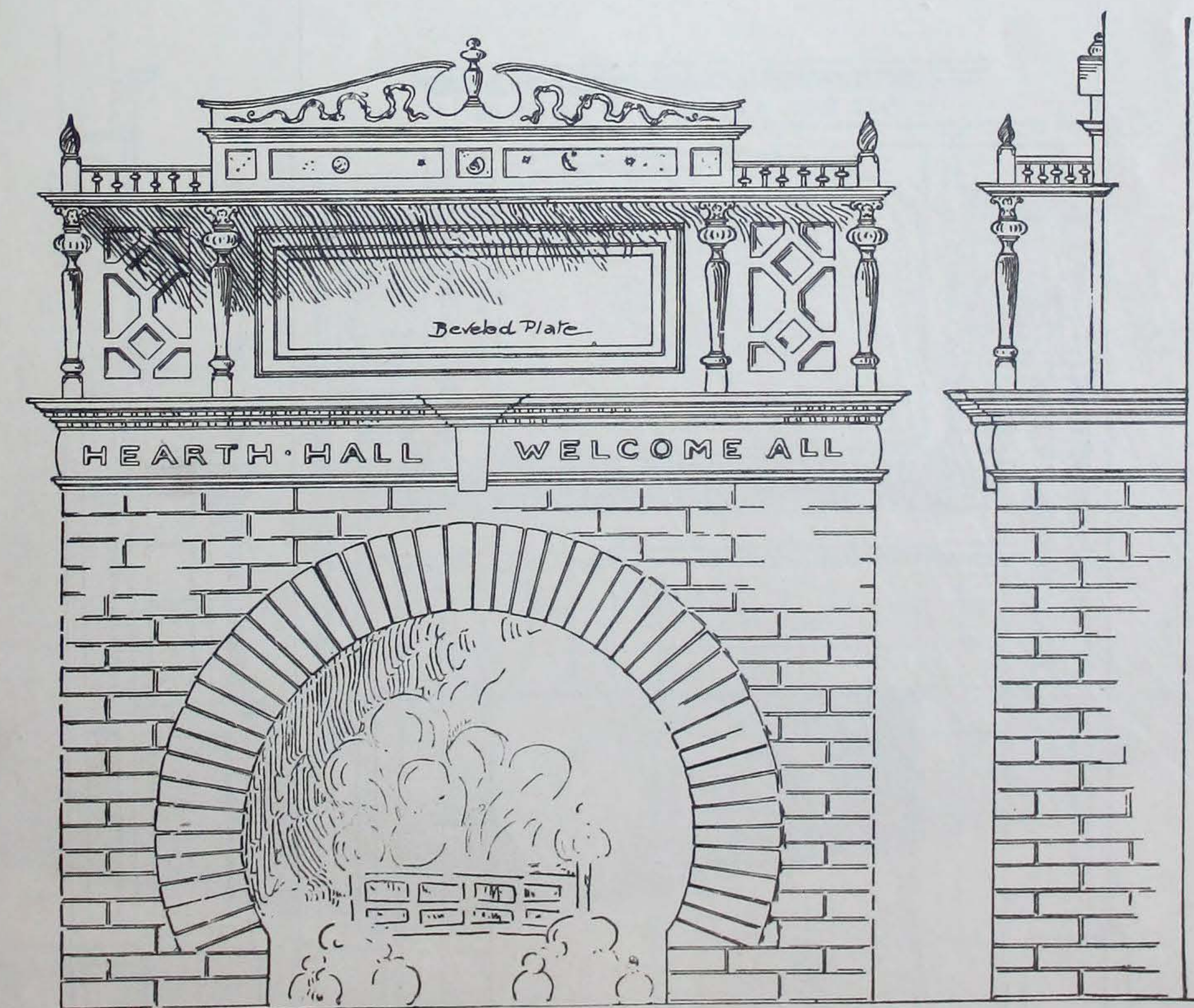


STAIR NO. 8

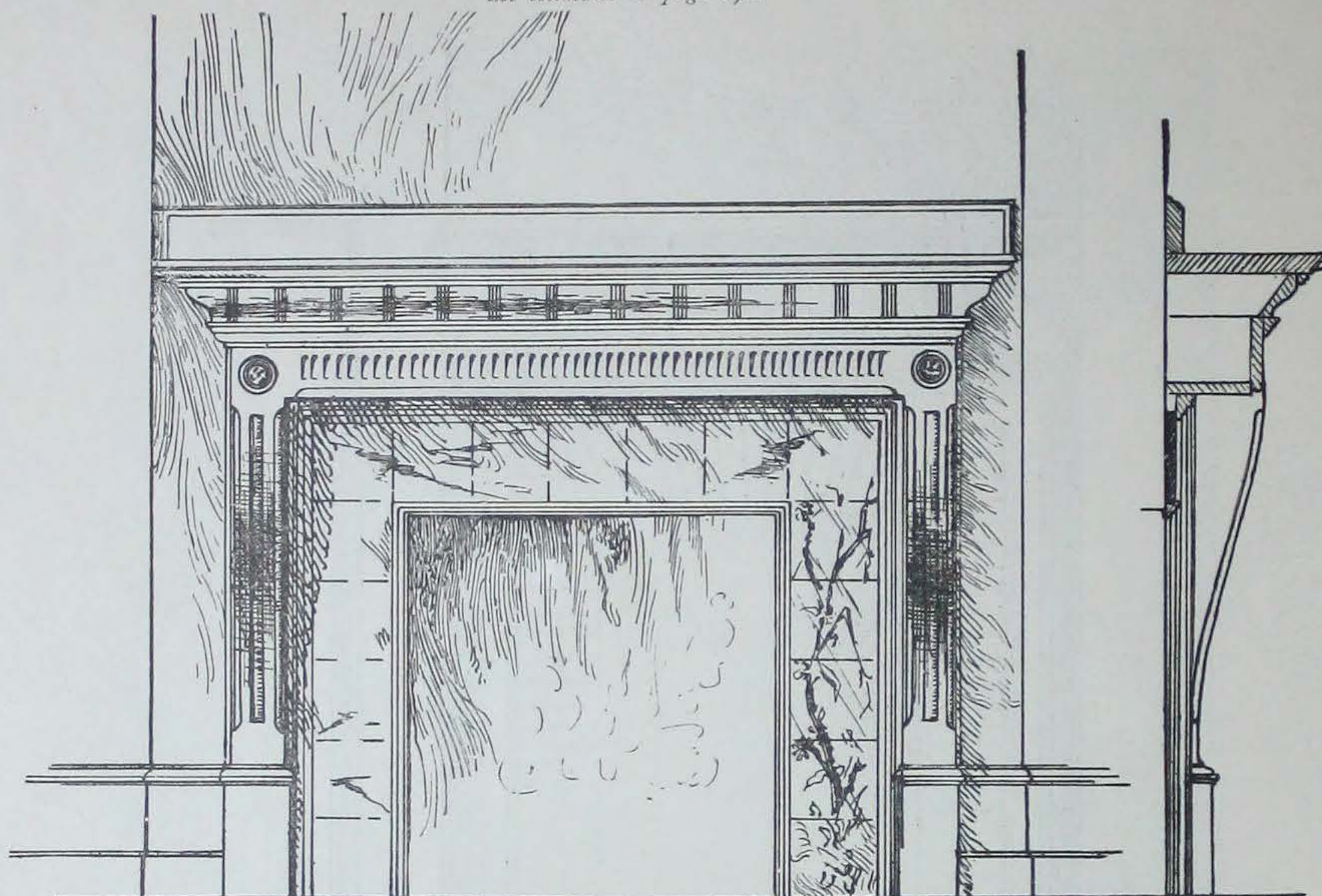




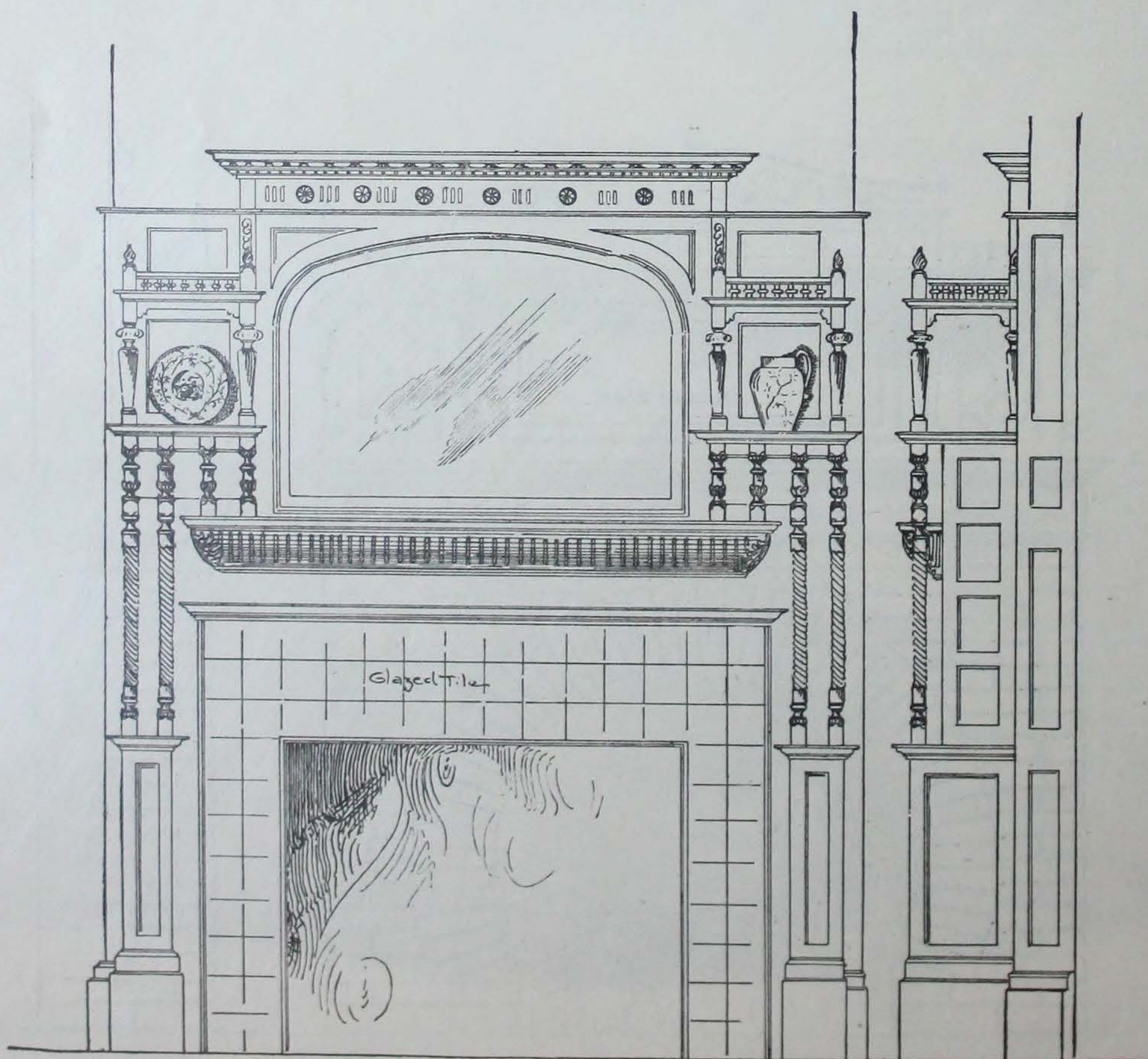
MANTEL NO. 1



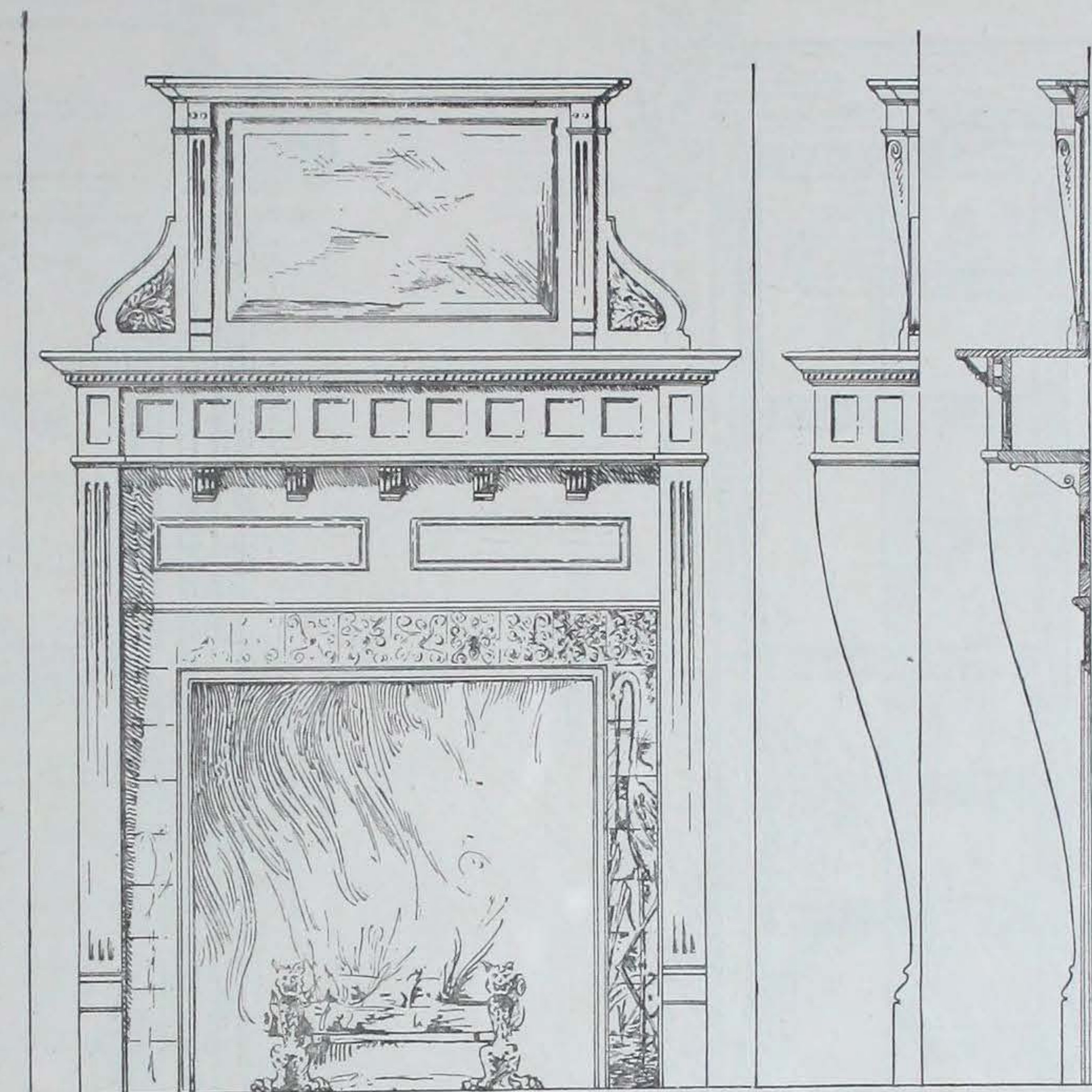
MANTEL NO. 2

See estimates on page 290.

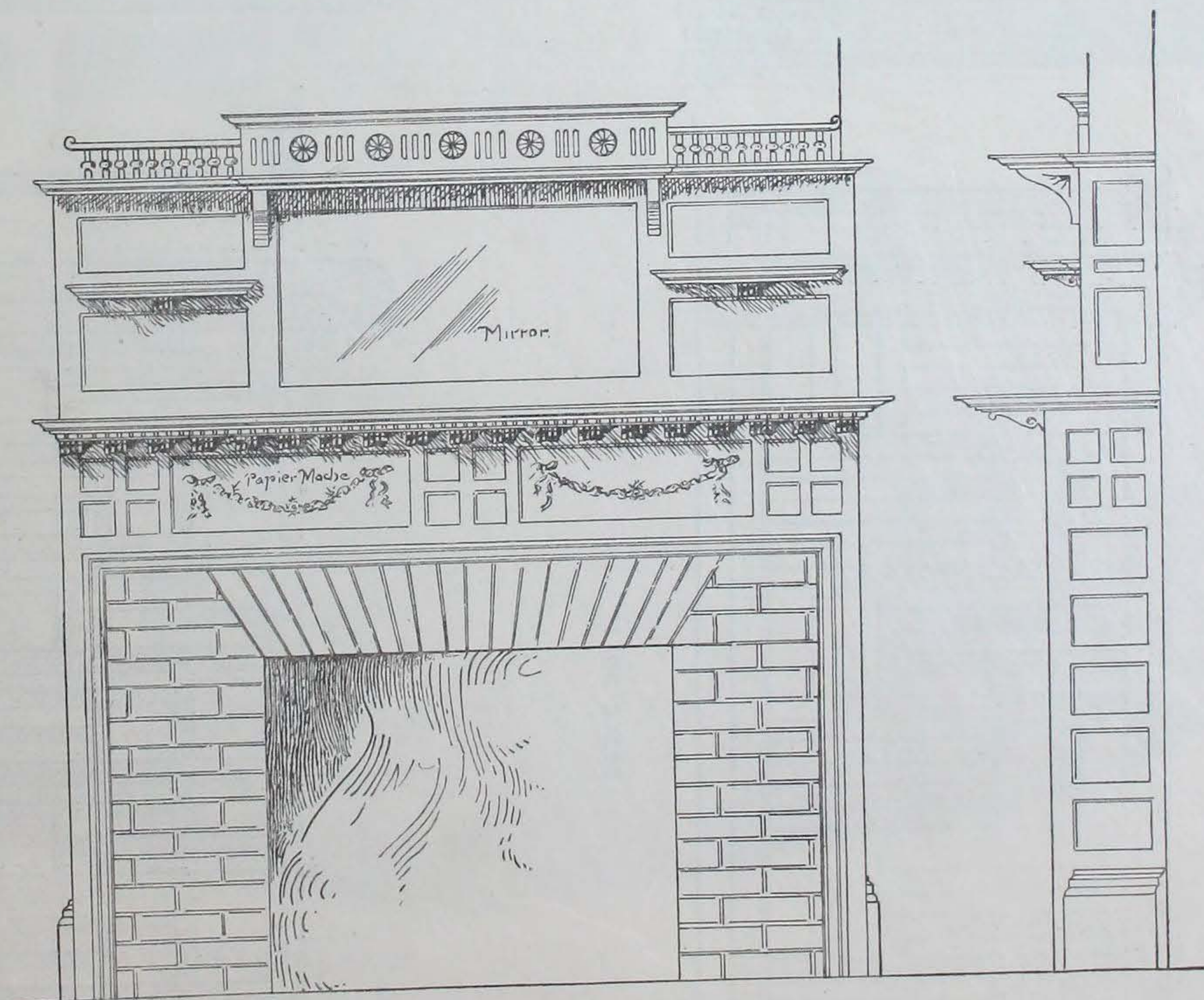
MANTEL NO. 3



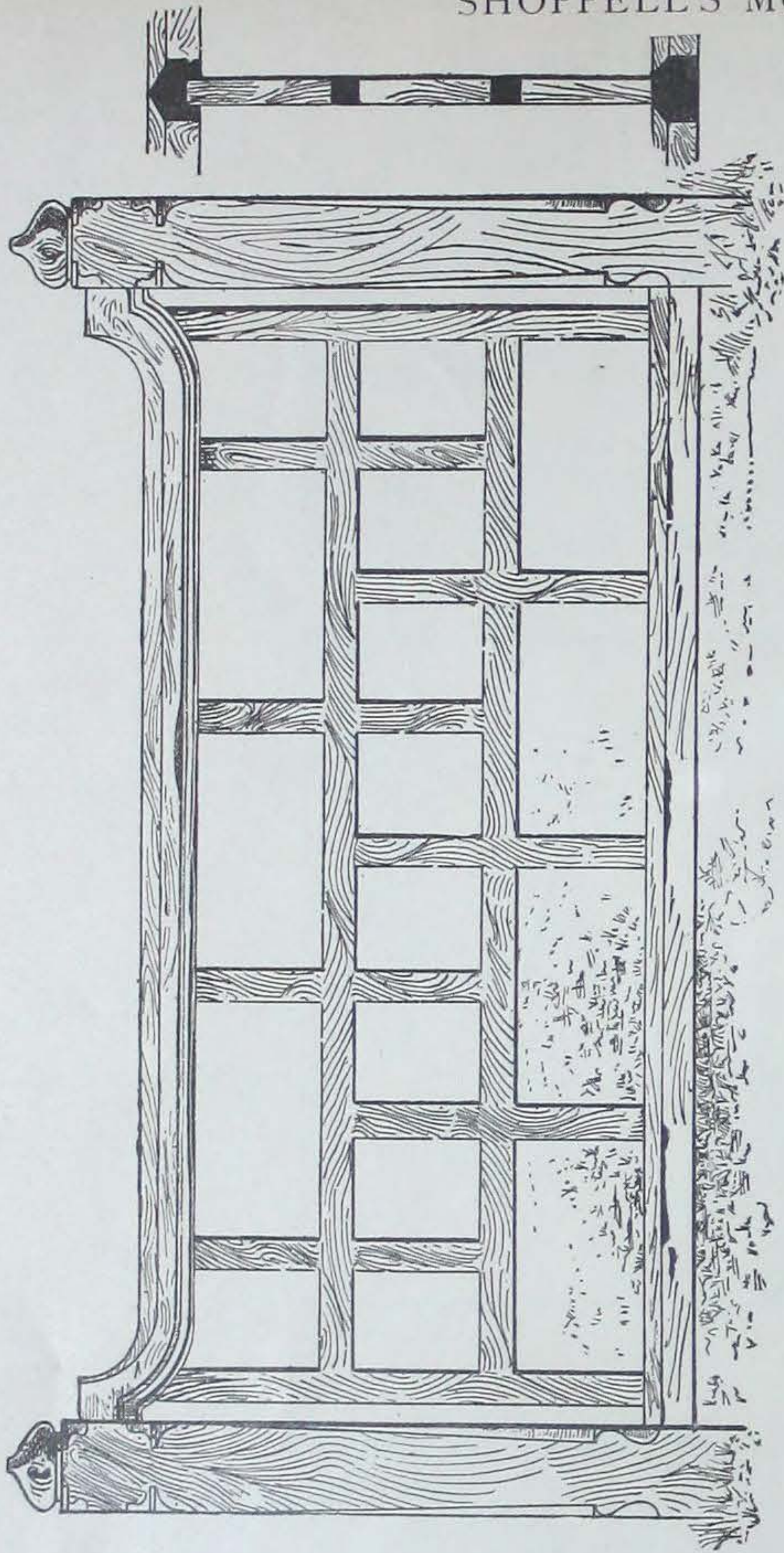
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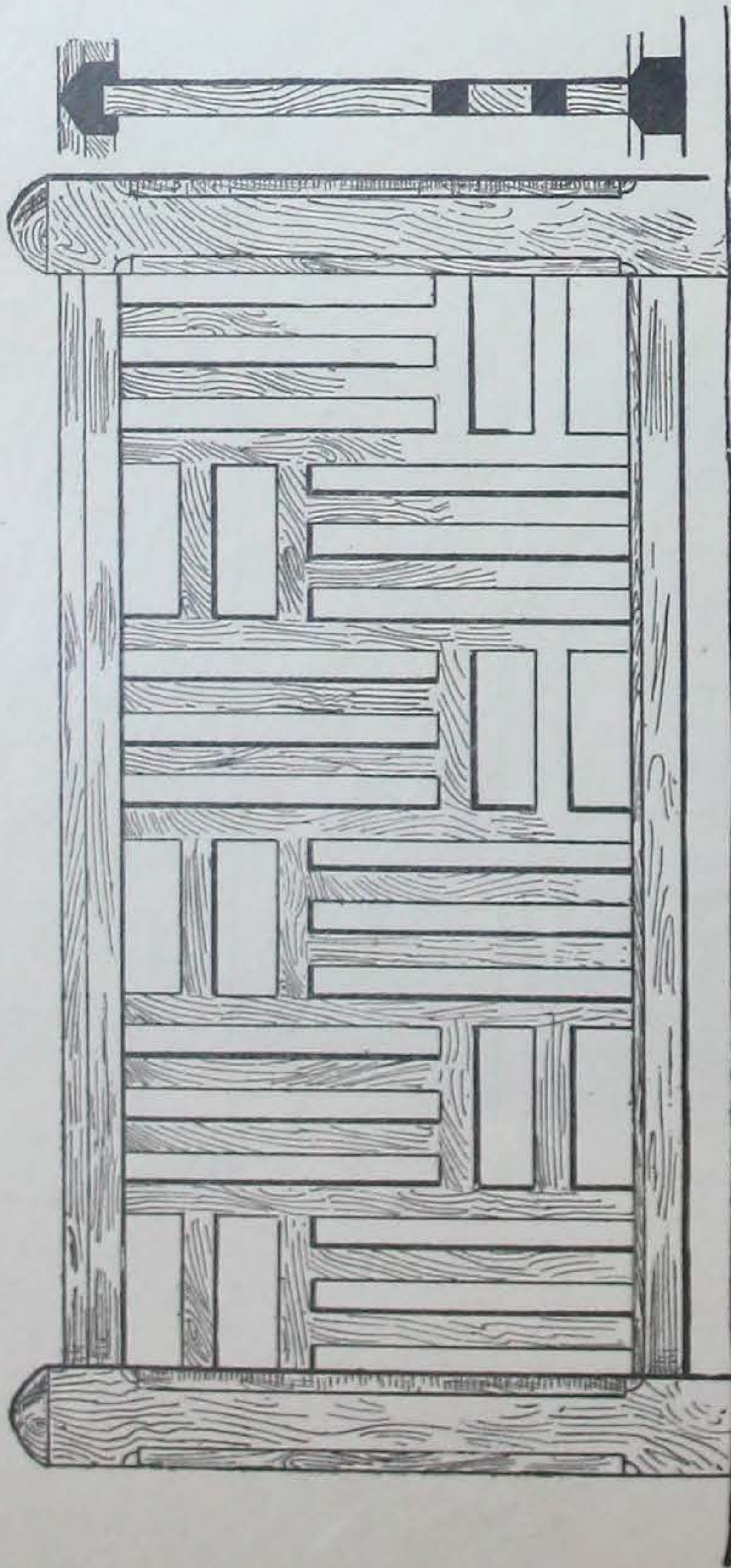
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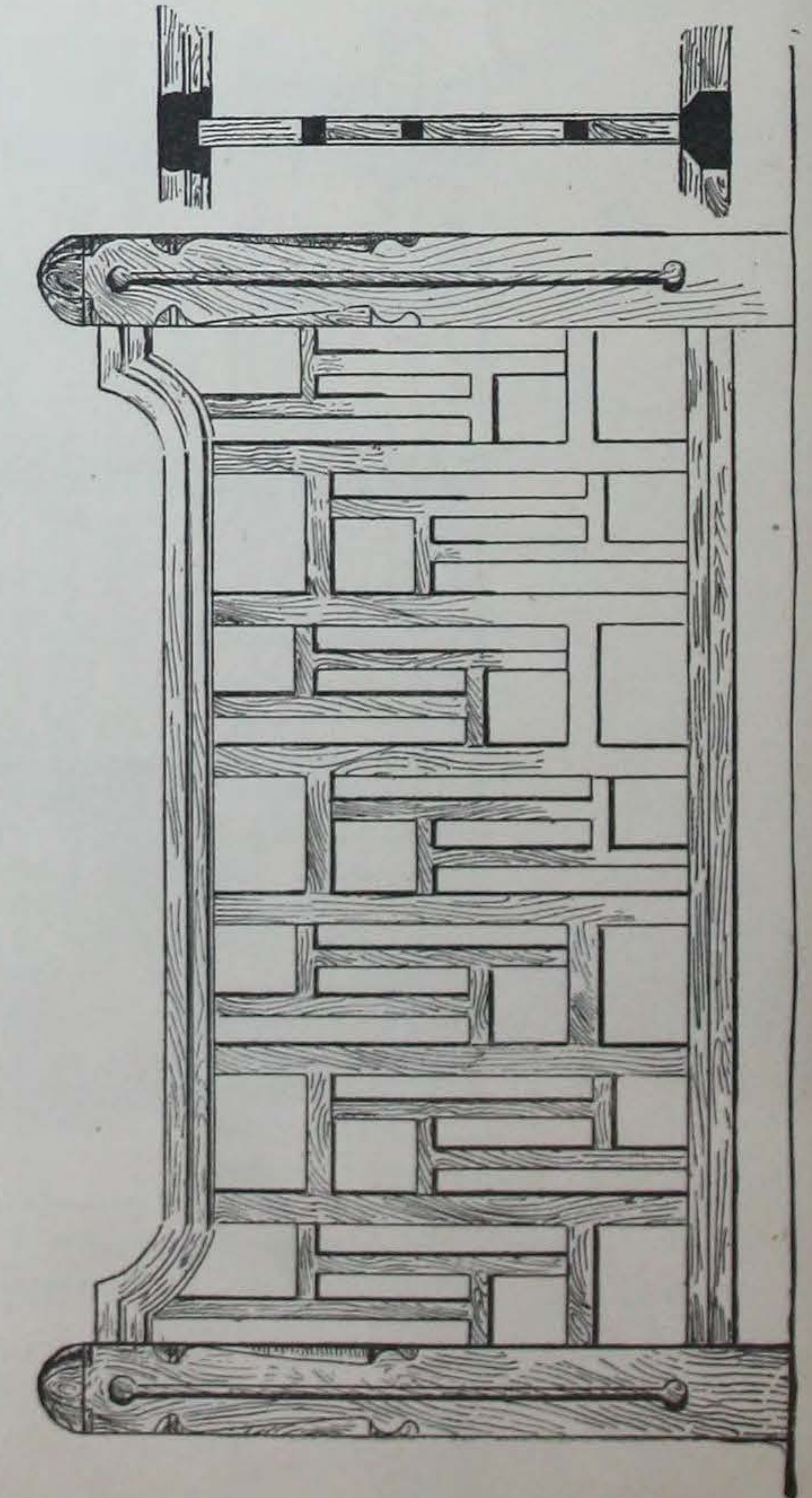
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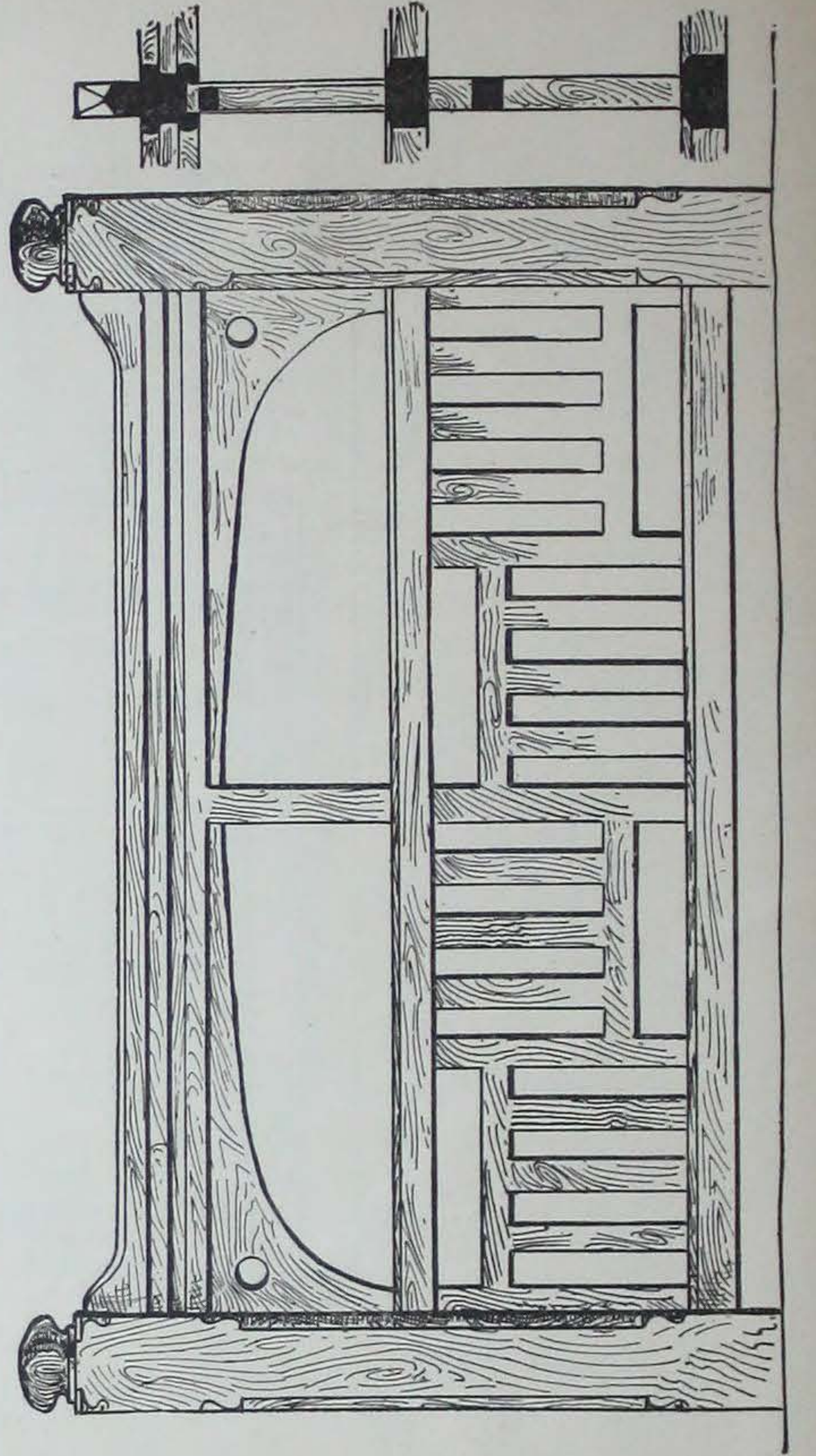
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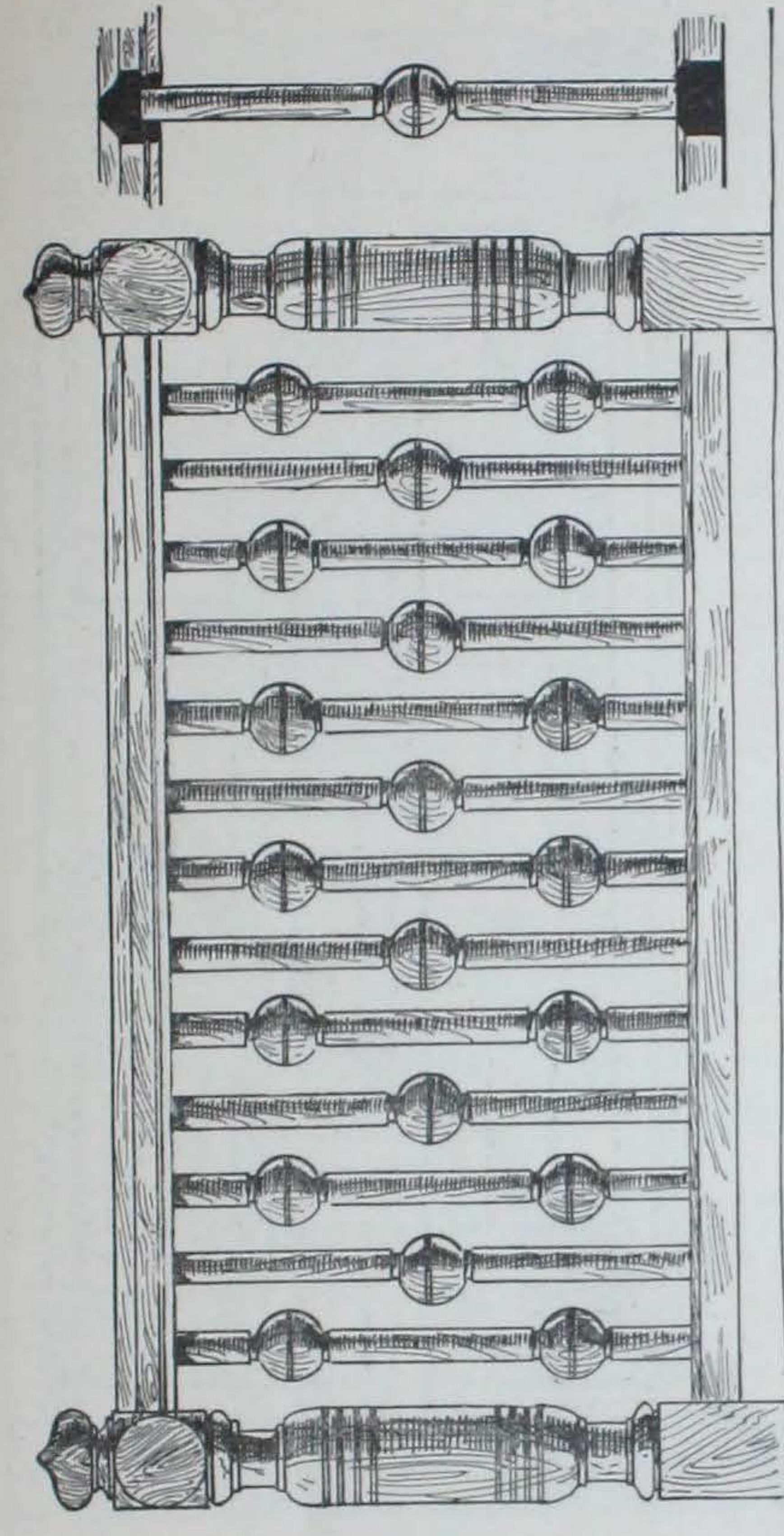
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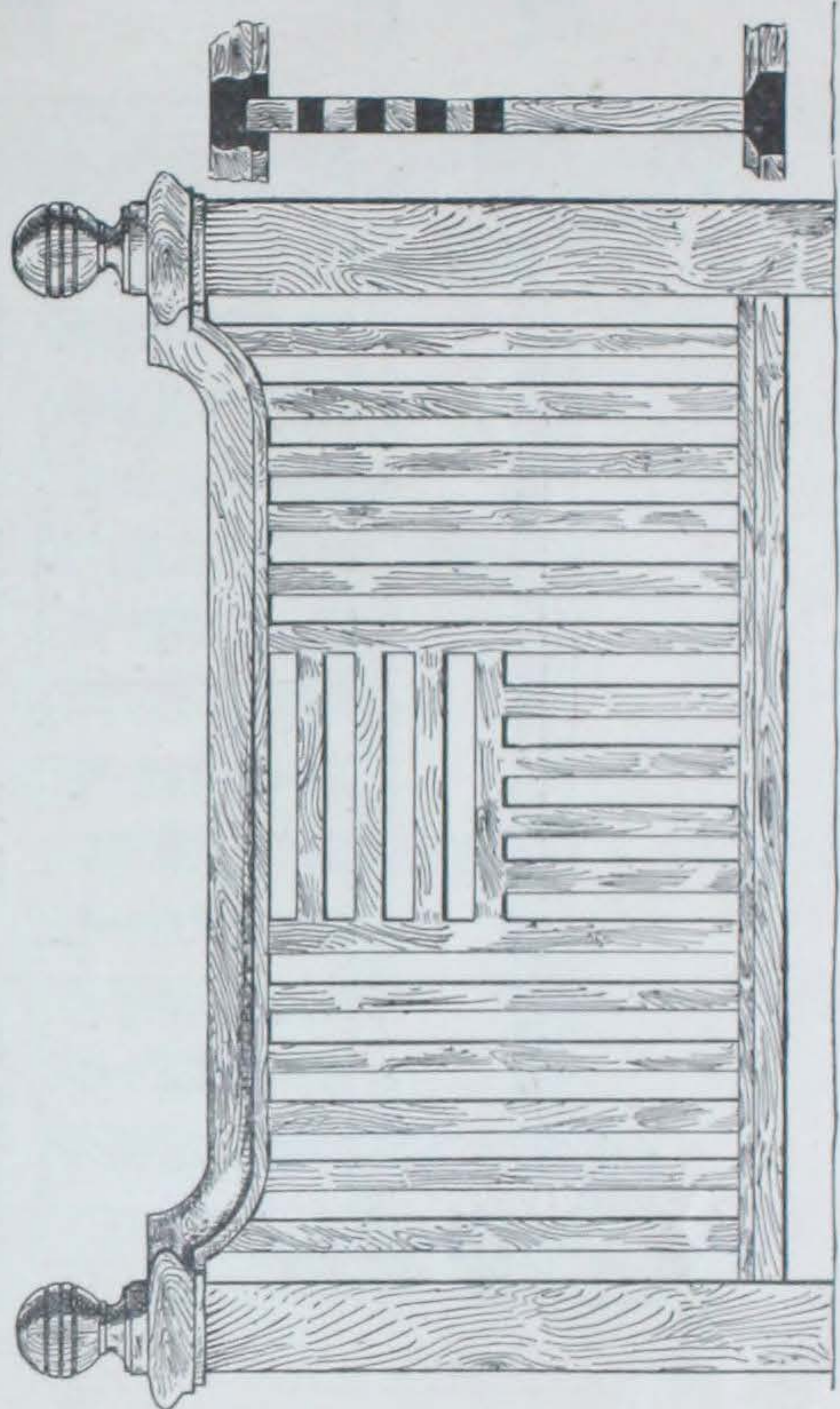
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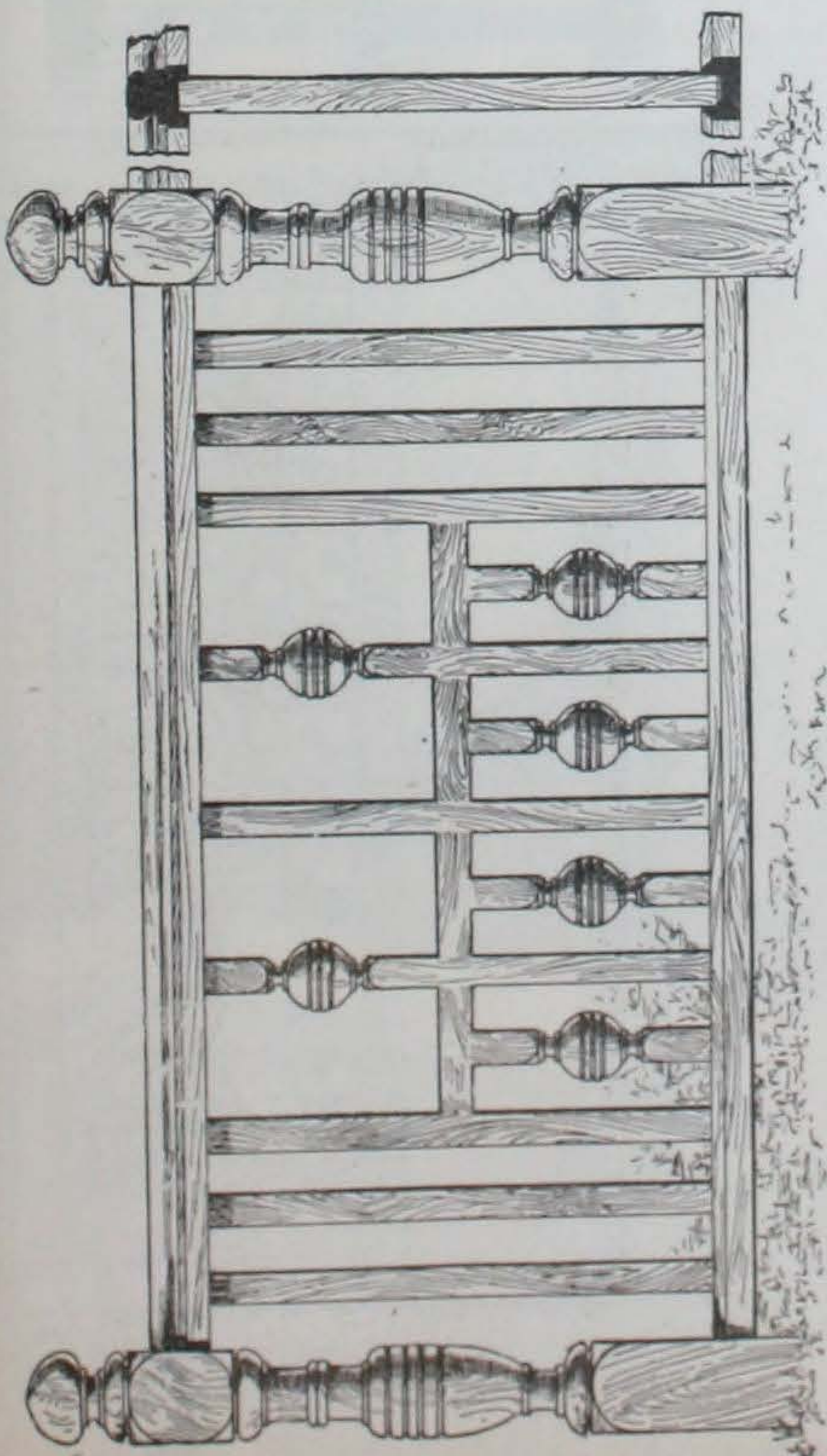
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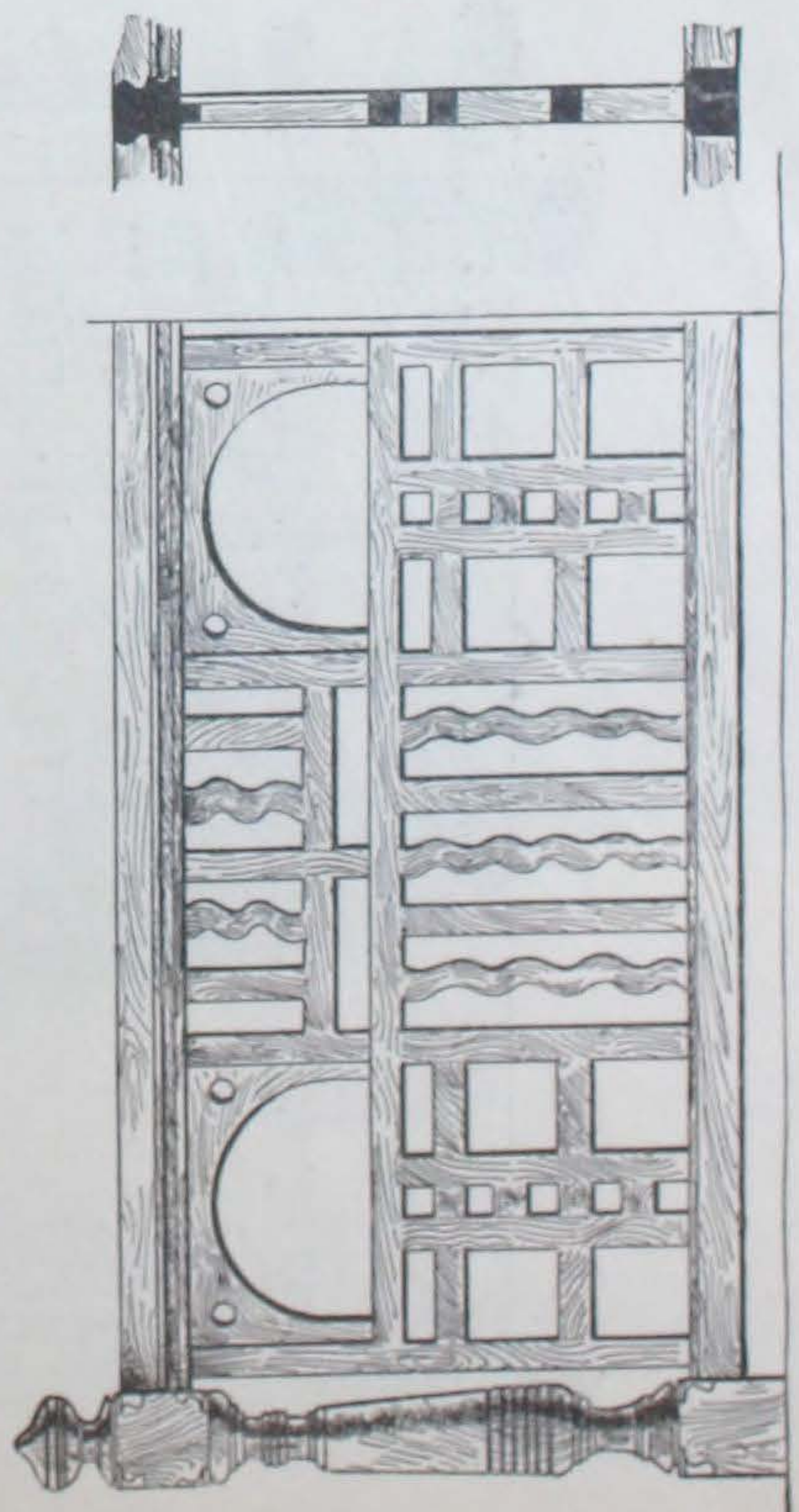
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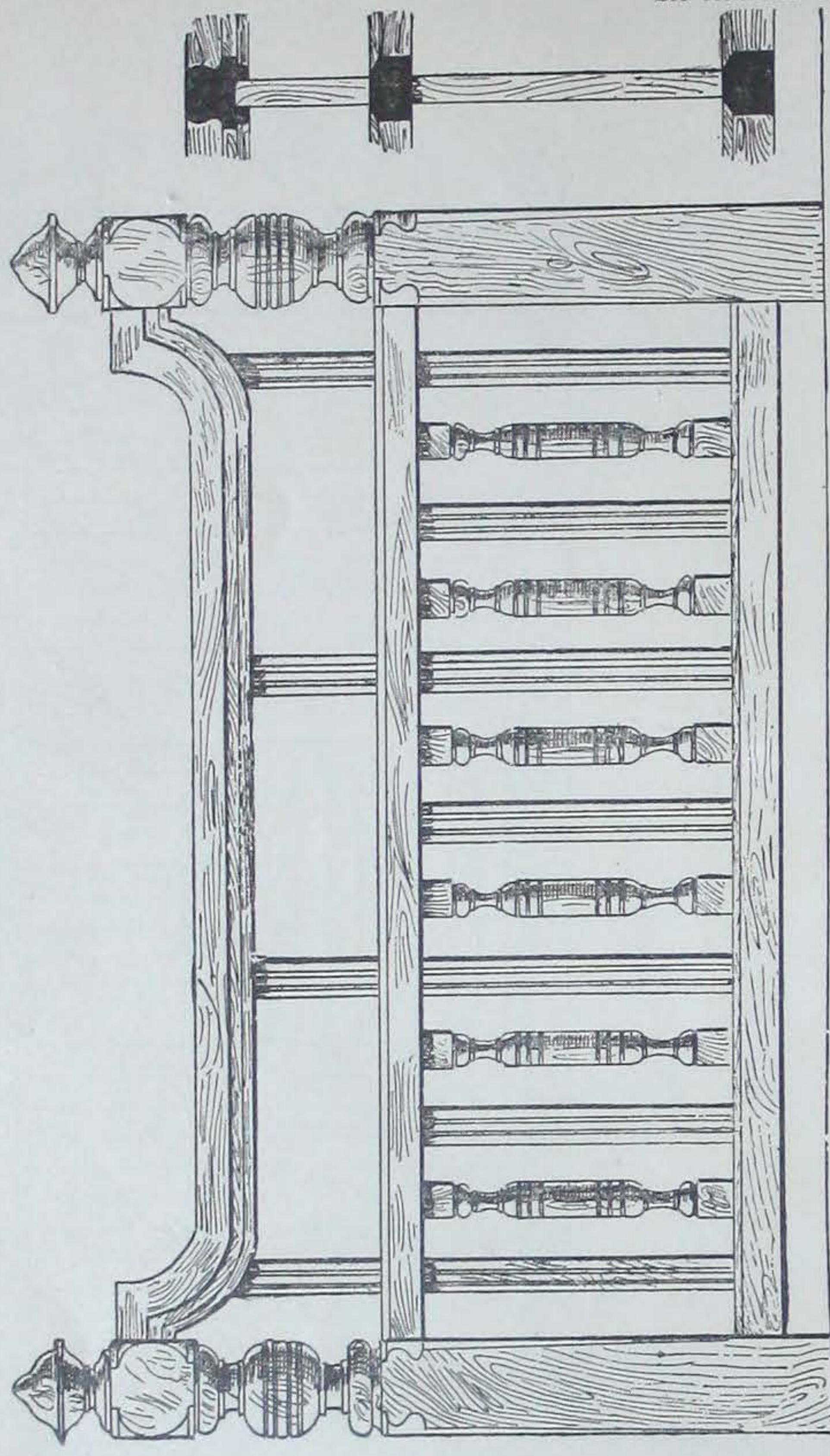


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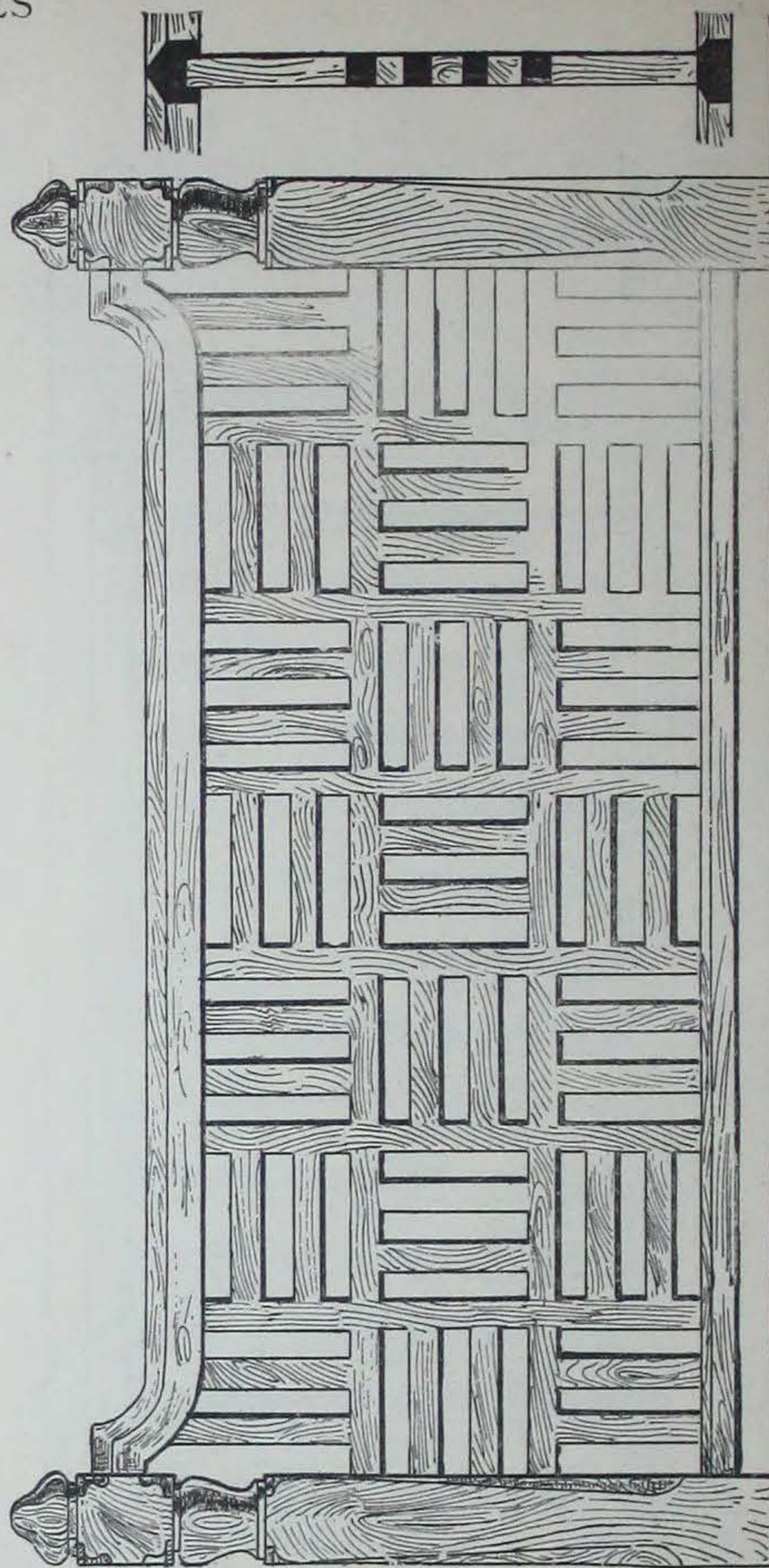


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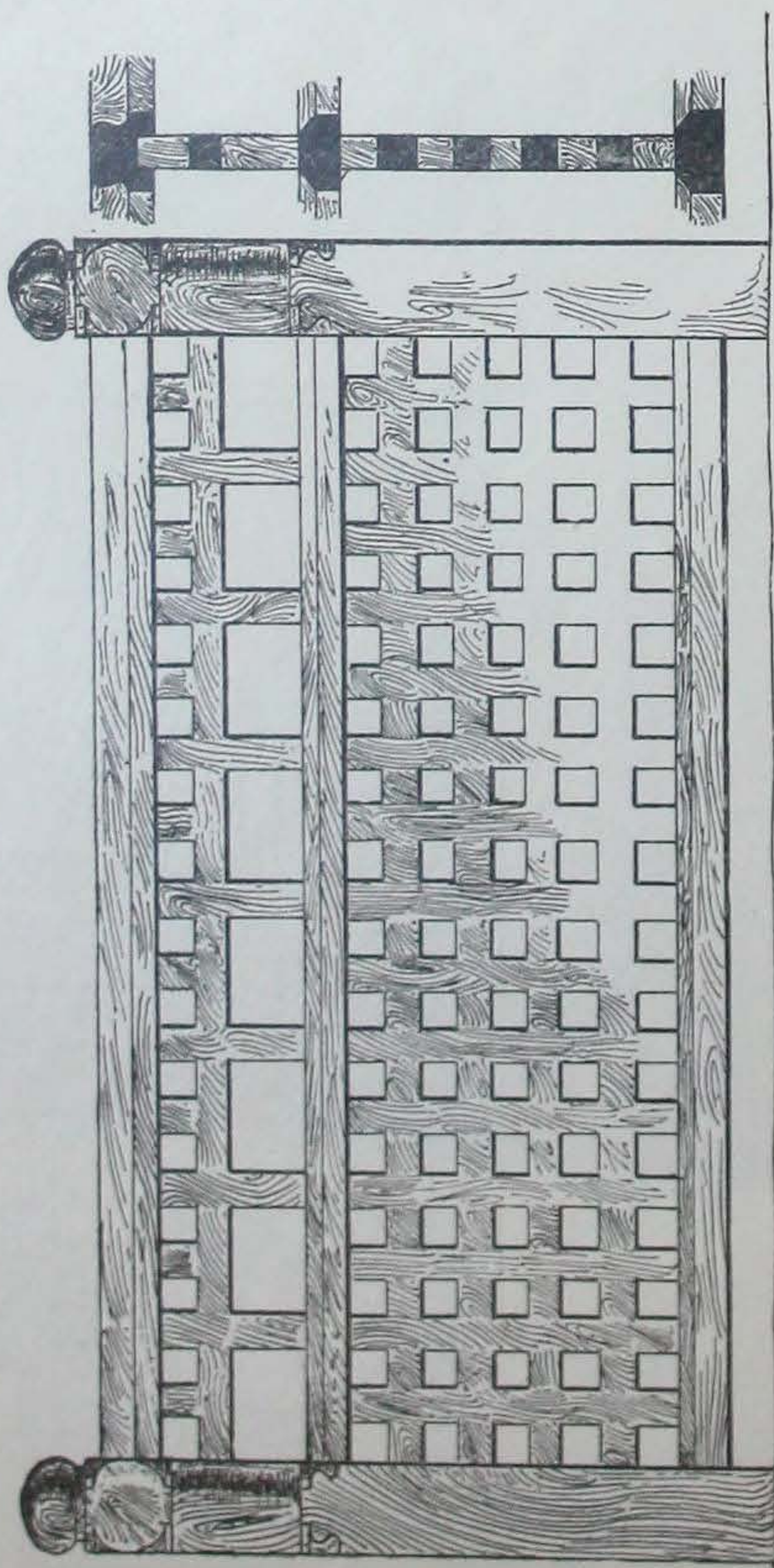
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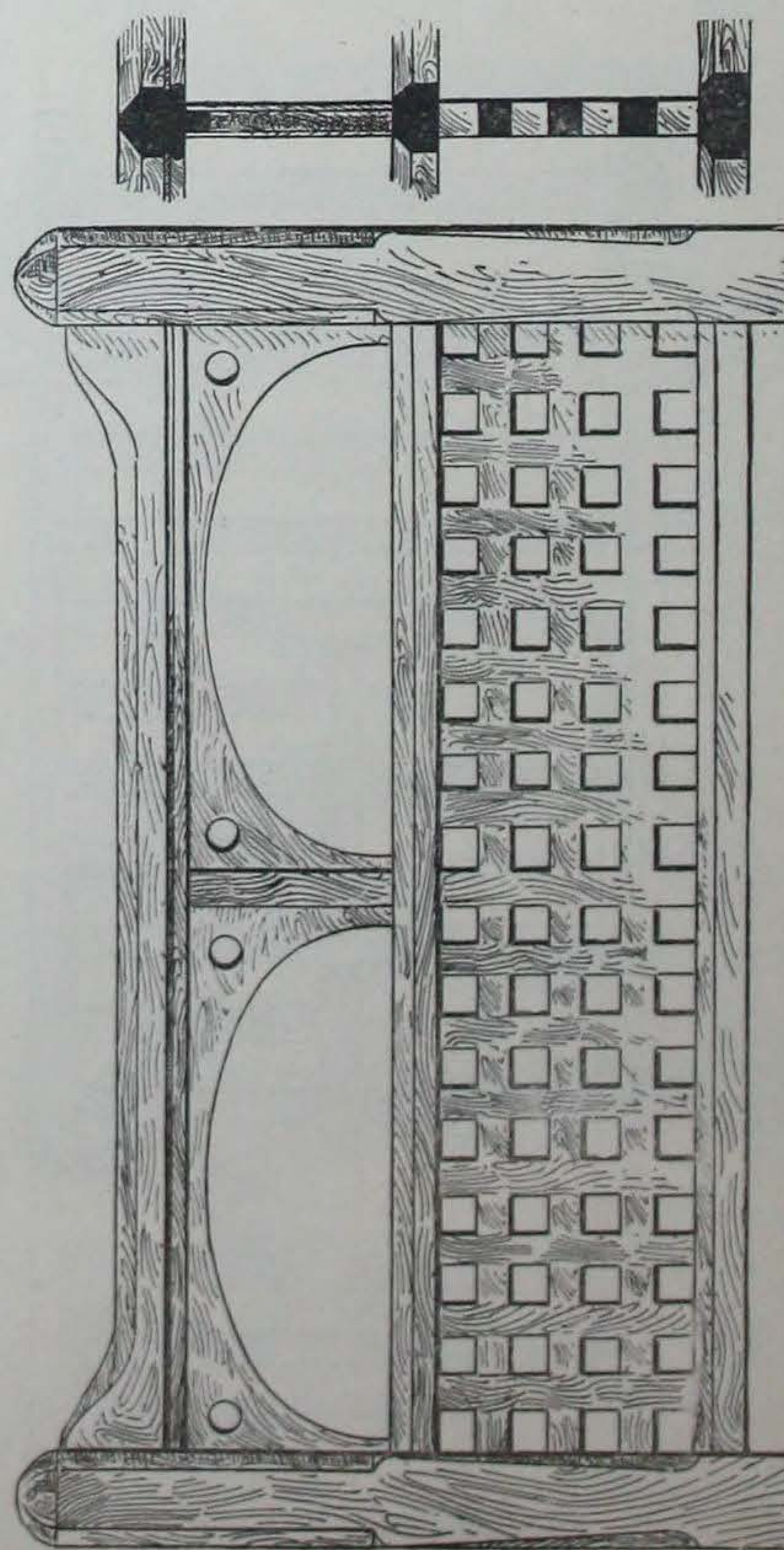
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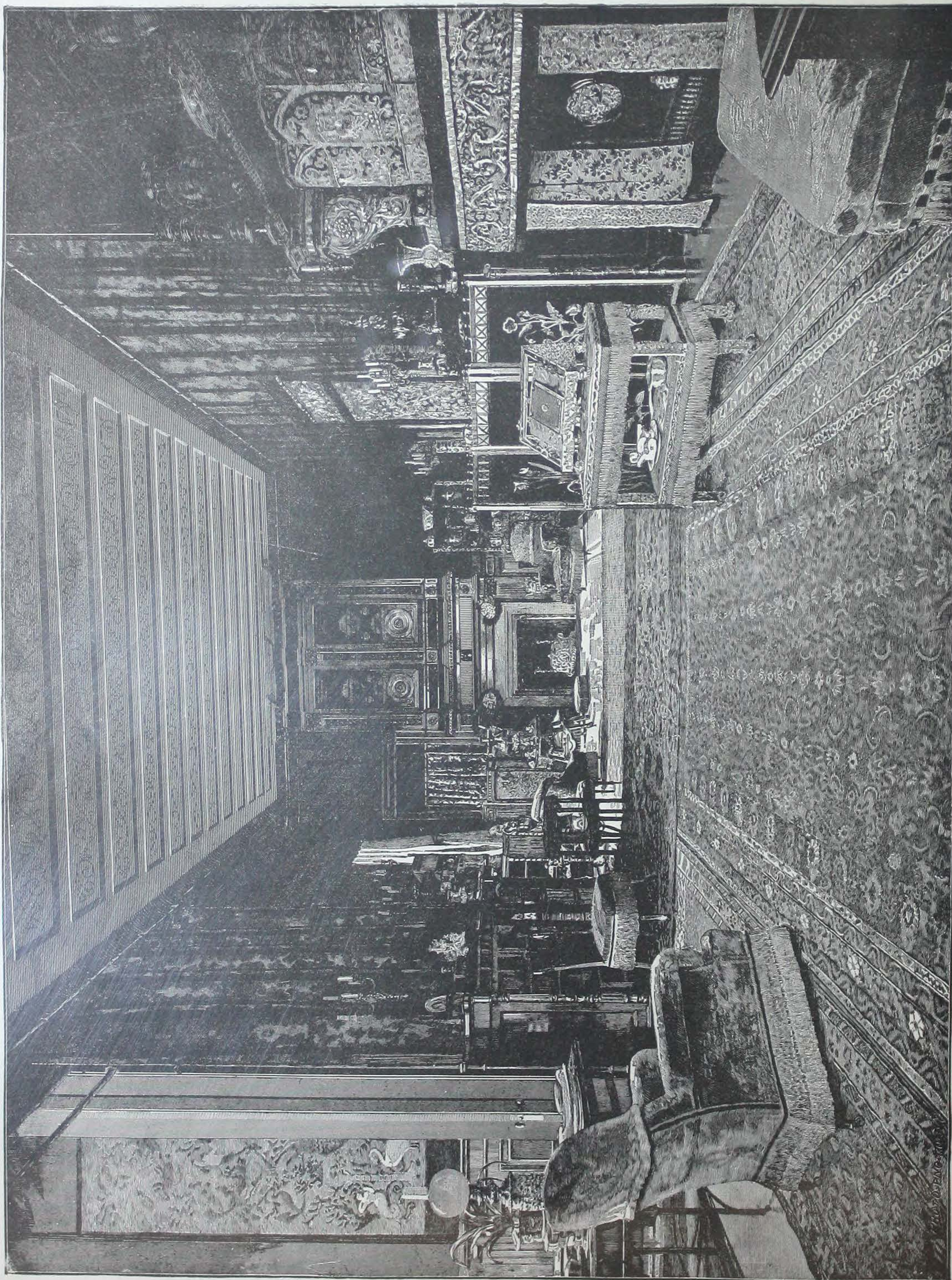
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Furniture and Decoration

DEPARTMENT



INTERIOR OF A PARLOR, IN HOUSE ON FIFTH AVENUE, NEW YORK.

FURNITURE AND DECORATION.

CHAPTER I. INTRODUCTORY.

The preceding parts of this volume treat of the plans and designs of dwellings and other buildings, interesting not only architects but the vast number of people who intend to build, and who, consequently, want all the information on the subject of building which their means afford them. Manifestly, however, the interest of this section of the work done in the present volume is even more general. Very few persons, comparatively, are without a home, and everybody who has one, if but a flat, a hired cottage or even a room in a tenement-house, cannot but have some regard to the utility, economy, fitness and beauty of its furnishing. Probably the majority of people who read these pages are not rich, but so diverse are the means to make home a convenient and beautiful place, one proper to the shrine of the domestic affections, that the humblest reader will not fail to find in these pages such instructions and suggestions as will prove of great value to him. The reproduction of beauty in form and color, in wood and textile fabrics is, happily, so cheap in this country, that even poverty is no bar to the possession of a refined and truly beautiful home.

Nor would it be too much to claim that the owners of many homes in this republic, although obscure persons and unblessed with wealth, evidence in their domestic arrangements refined and artistic spirit and feeling. On the other hand, opulence is seen to range in spacious houses in which, from attic to cellar, no trace can be found of artistic perception on the part of their owners; but, instead, stupid and unmeaning imitation and ostentatious vulgarity abound. Paper-hangers and upholsterers are the ruling powers in the furnishing of such homes as these, and if Mr. Shoddy can outgild and outspend Mr. Parvenu he is content to pay the heavy cost of these undertakings, ignorant of the fact that the arrangements in every room of his house are a violation of the principles of good taste and refinement.

When Keats wrote the line: "A thing of beauty is a joy for ever," he expressed in undying words a truth of infinite meaning. Fashion in domestic furnishing, as in everything else, is the subject of many changes, but the truly beautiful is unchangeably so; and who finds it and utilizes it can afford to be independent of the cost and worry of deference to the passing and frequent changes which fashion introduces. The loveliness of Nature is as permanent as infinitely various in its expressions through form and color, and the closest observer of these approaches the nearest to the correct apprehension of the principles which underlie every manifestation of eternal beauty.

These introductory observations may well be completed with a few remarks of a practical description. In the furnishing of home, the leading principle should be that it is a place of repose, a refuge from the excitements and distractions of life outside. Hence it should be provided with every attainable means of rest and recreation, and this implies also, with every attainable refinement of form and color. In such homes as we have described, the virtues which give them preference are fostered and expanded, and that is the most prosperous and happy community in which such sanctuaries of repose and beauty are the most numerous.

Woman is the queen of the ideal home:

Here woman reigns; the mother, daughter, wife,
Strew with fresh flowers the narrow way of life;
Around her knees domestic duties meet,
And fireside pleasures gambol at her feet.

Let every fair reader regard these pages as of special importance to her. Though she may be denied opulence she need not find a subject of discouragement in the fact that her means may not command the opportunity of her providing such belongings and adornments to her house as will be found described in some of the letter-press and illustrations given herewith; but quick feminine perception and good sense will be found equal to the pleasing task of so utilizing the most elaborate and costly things which we shall describe, as to see and employ in an humbler form, all the essential qualities which render them desirable. The cheap or home-made piece of furniture or fabric may be even more convenient and certainly as artistic as the most costly production of the cabinet-maker or the loom.

The husband, son and brother will find in the assistance they render the wife and daughter in the improvement of home, pleasure most gratifying and instructive. American ingenuity and refinement are provided with superior means to this end, in those cheap tools which assist but do not supersede handicraft labor. So far as machinery supersedes labor it tends to the degradation of art, because its product is uniform and destitute of the character imposed upon the simplest product of hand labor by the individuality of its maker. It is equally obvious that the effective tool in the hand of the skilled and interested workman, enlarges his power to express his thought and feeling in the wood or other material which he fashions or adorns.

CHAPTER II. THE HALL AND THE STAIRCASE.

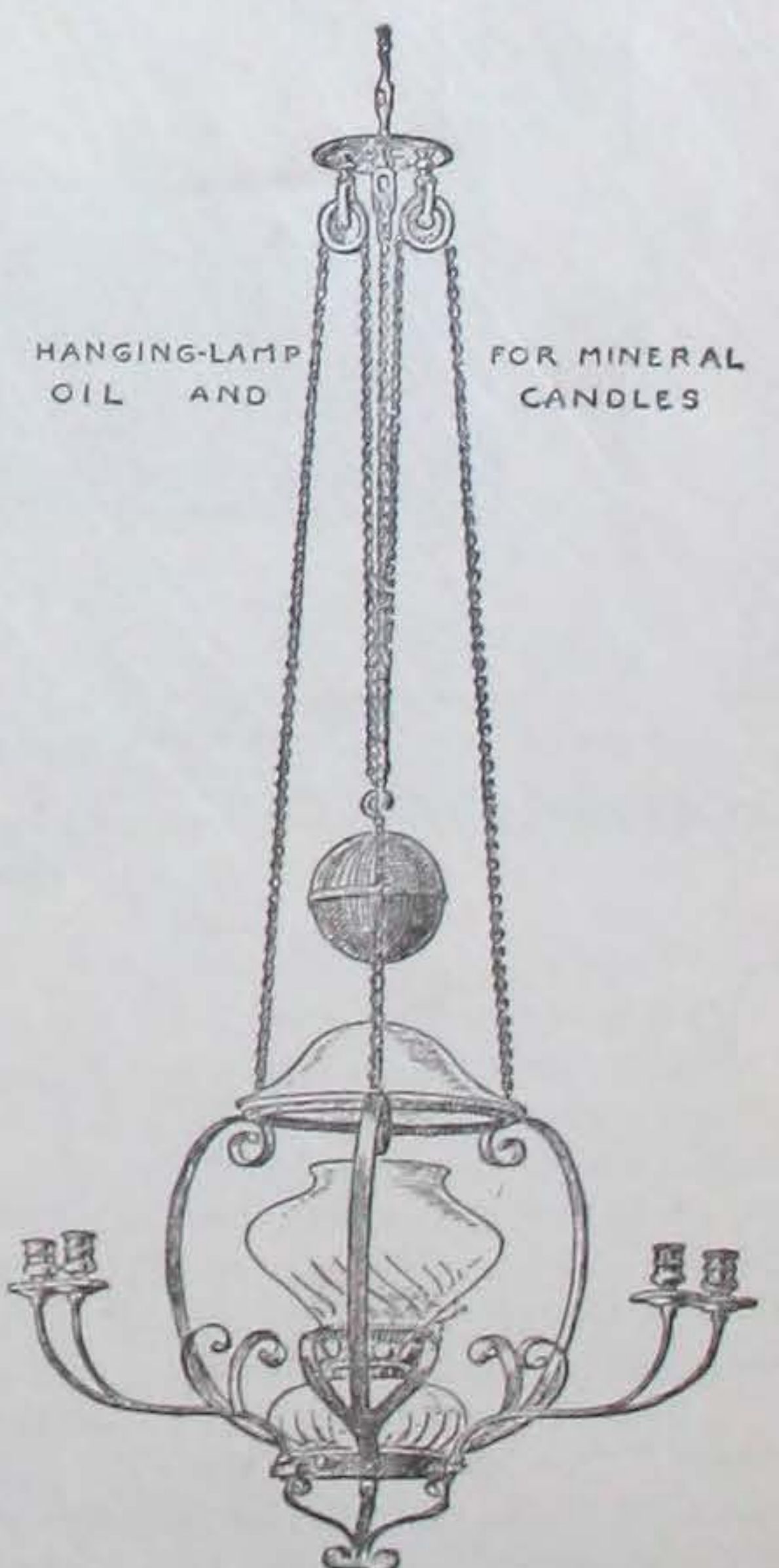
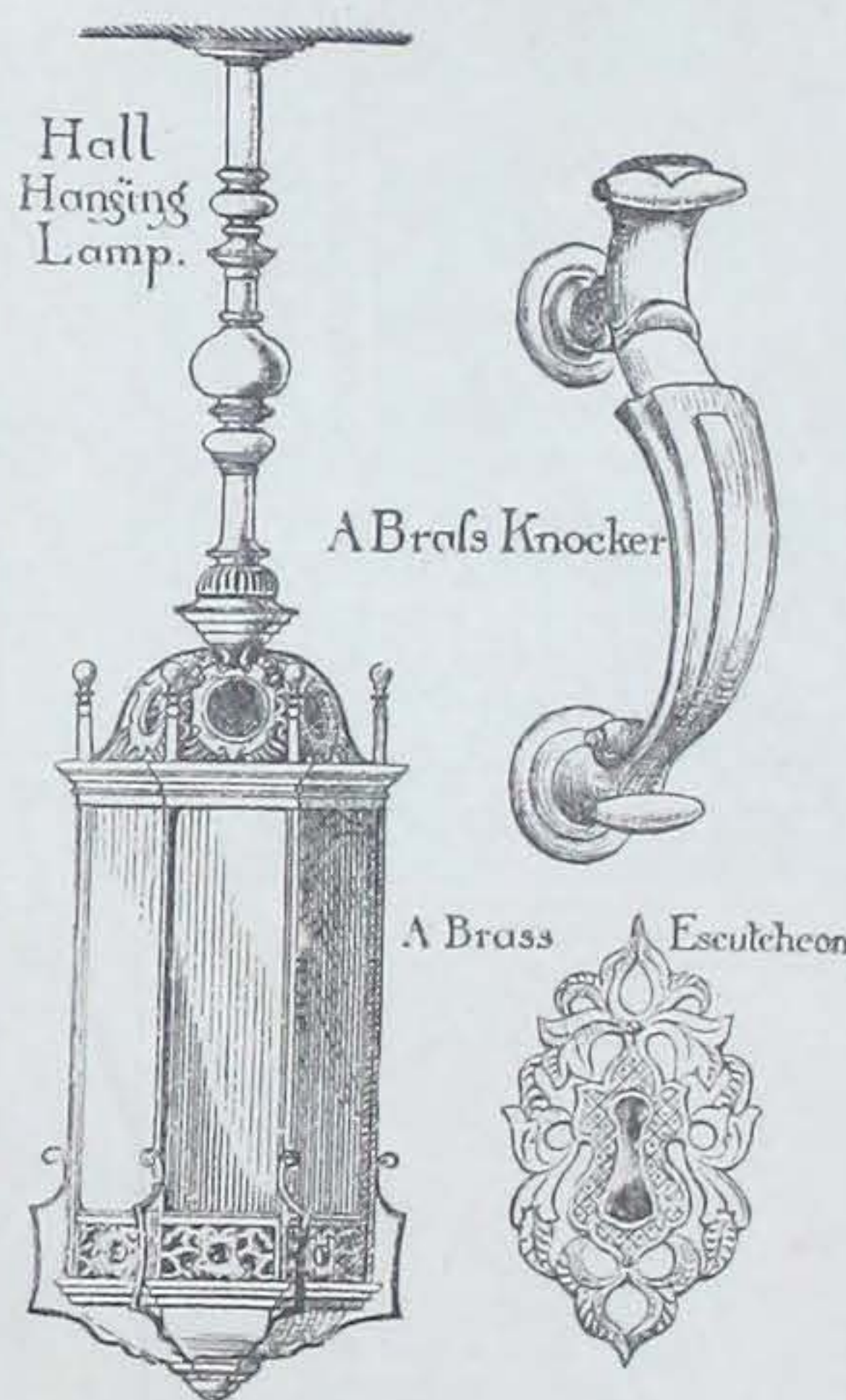
In the next six chapters every part of the house is treated with regard to its appropriate furniture and decoration. The accompanying illustrations will be found to increase the value of the reading matter, by adding to its suggestiveness as a guide, useful to all persons, whether rich or poor or in the middle condition of life, but who are one in the laudable purpose of making the home, so far as convenience and well-chosen embellishments can make it, the most beautiful and desirable of all places.

First, in a scheme of furnishing, one would consider the walls. Your house may have been inhabited before, or perhaps it is newly built. In either case the probability is that the walls are already papered or painted, and with equal probability the paper-hangings are unsuitable, or at best only passable. It is a singular thing that the builder should be allowed to take the initiative in decorating a house, without the slightest reference to the wishes of those who may occupy and furnish it. It might be better if he would content himself with putting on a first coat of paint only.

Now, as the walls constitute a background—an atmosphere, so to speak, of tone or color, from which the occupants are never free, and which must exercise, not a mere sentimental, but a positive influence upon their nervous organism, we would say: By all means have your normal surroundings as much as possible in harmony with your individual taste, and with the special requirements of the several apartments.

The hall or vestibule, as the first division of a house that meets the eye on entering, should either be of a quiet and undemonstrative nature, or else it should give the key-note to the entire house. In any case the furniture as well as the decoration should be in a lower key than the rest of the house, never richer. Unless your hall chance to be large, let the furniture be as condensed as possible, and have as little of it as needful for the exigencies of an entrance-room or passage. A small side-table, a chair or two, an umbrella-stand, some appliance for hats and coats, are the necessary requisites of a hall. The hat and umbrella-stand may be combined, or that eminently practical invention, a rail and pegs fixed to the wall, may be substituted for the usually unsteady and inelegant hat-stand; while a brass or bronzed rail fixed to the wall, with a painted zinc pan on the floor, will do duty for the umbrella-stand.

Cast-iron hat-stands and hall-tables, with plate-glass mirrors, and marble-tops, are to be avoided: there is a chilly, skeleton machine look about them, which strikes horror into one at the first glance. You can never make an artistic room with iron furniture; and moreover, although the term "iron" is almost a synonym for strength, the iron hall furniture offered for sale is none of the strongest, and when once broken in any part cannot be made good except in the clumsiest way. The ordinary pattern hat-stand, however, looking like a series of out-spread arms on an attenuated frame, is quite as bad in its way, being less steady and almost as ugly. There are some good hat-stands now made, having at each end a quarter-circle rail for umbrellas,

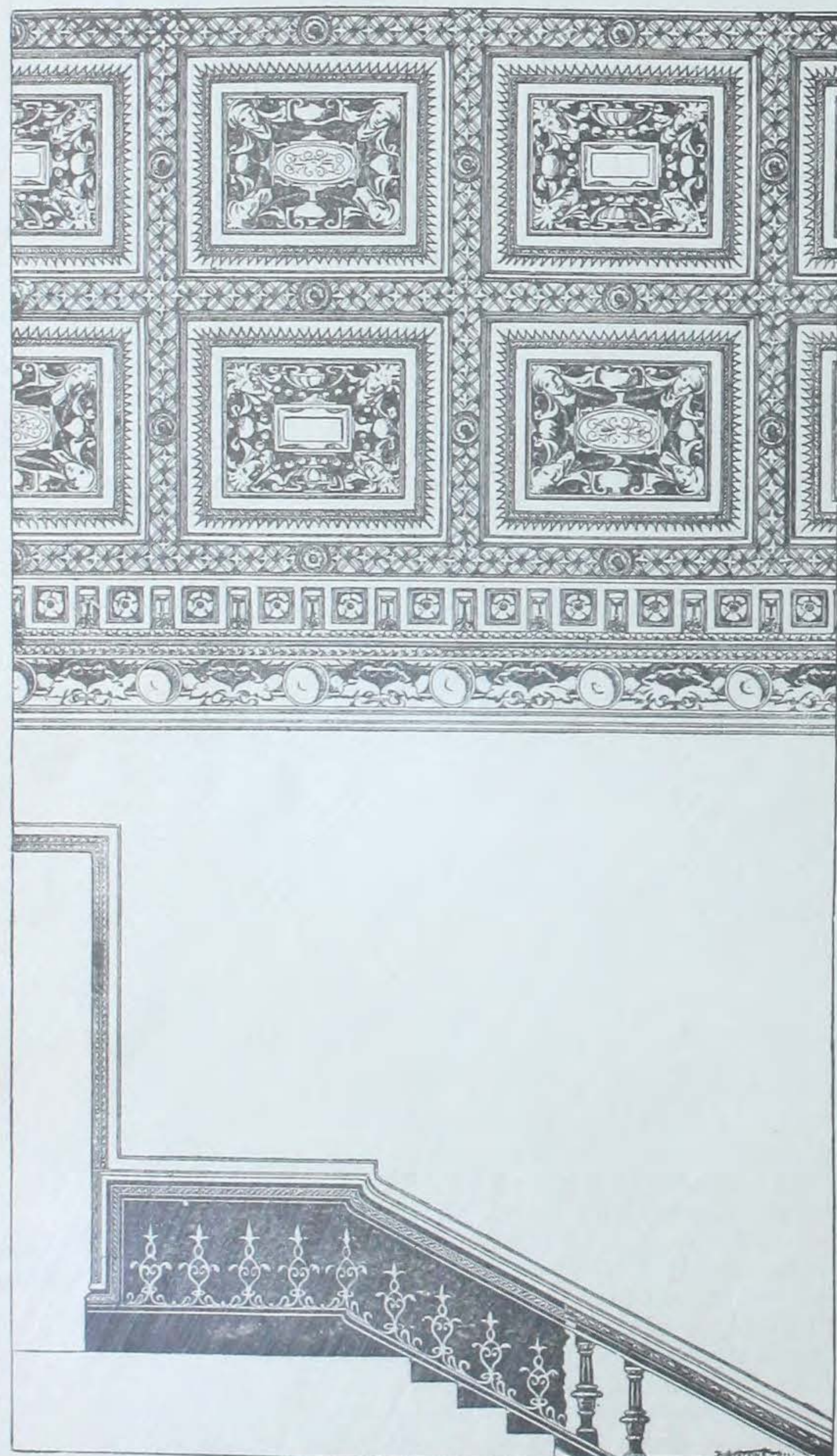


and a table between. The only thing is, the table or the umbrellas are generally in the way of the coats, and this seems the great difficulty to overcome in attempting to combine the objects of a hat-stand, hall-table, and umbrella-stand in one.

The choice of color will depend upon the treatment of the walls. Light or dark oak or walnut, are useful woods, or stained black (ebonized) furniture, if the decoration admits of it. The writer has seen a hall-table, hat-rail, and bench of pine painted a plain color—say olive-green or chocolate, suitable to the surrounding coloring—which is inexpensive and unobjectionable, though not of course so durable as a harder wood.

If you have an outer and inner hall, so much the better. It keeps the inner hall more private and less draughty. The two are usually divided by glass doors, which give a good opportunity for introducing stained glass instead of the ordinary ground glass. The best plan is to glaze the upper portion of the doors with transparent sheet or plate glass, and temporarily fix the stained glass (which should be in a separate frame) against the lower part of the glazed panels, sufficiently high to intercept the view from the outer hall.

The pattern stained should not entirely cover the glass, nor be too heavily colored, or it will darken the light. If there are no doors, and your hall is long enough, it may be divided off by curtains suspended by a rod from the ceiling; or, better still, a sheet of



CEILING AND STAIRCASE DECORATION.

glass (two feet to three feet deep) may be framed in between the walls and ceiling, and the curtains suspended from beneath the glass. This will allow of light being thrown into the inner hall.

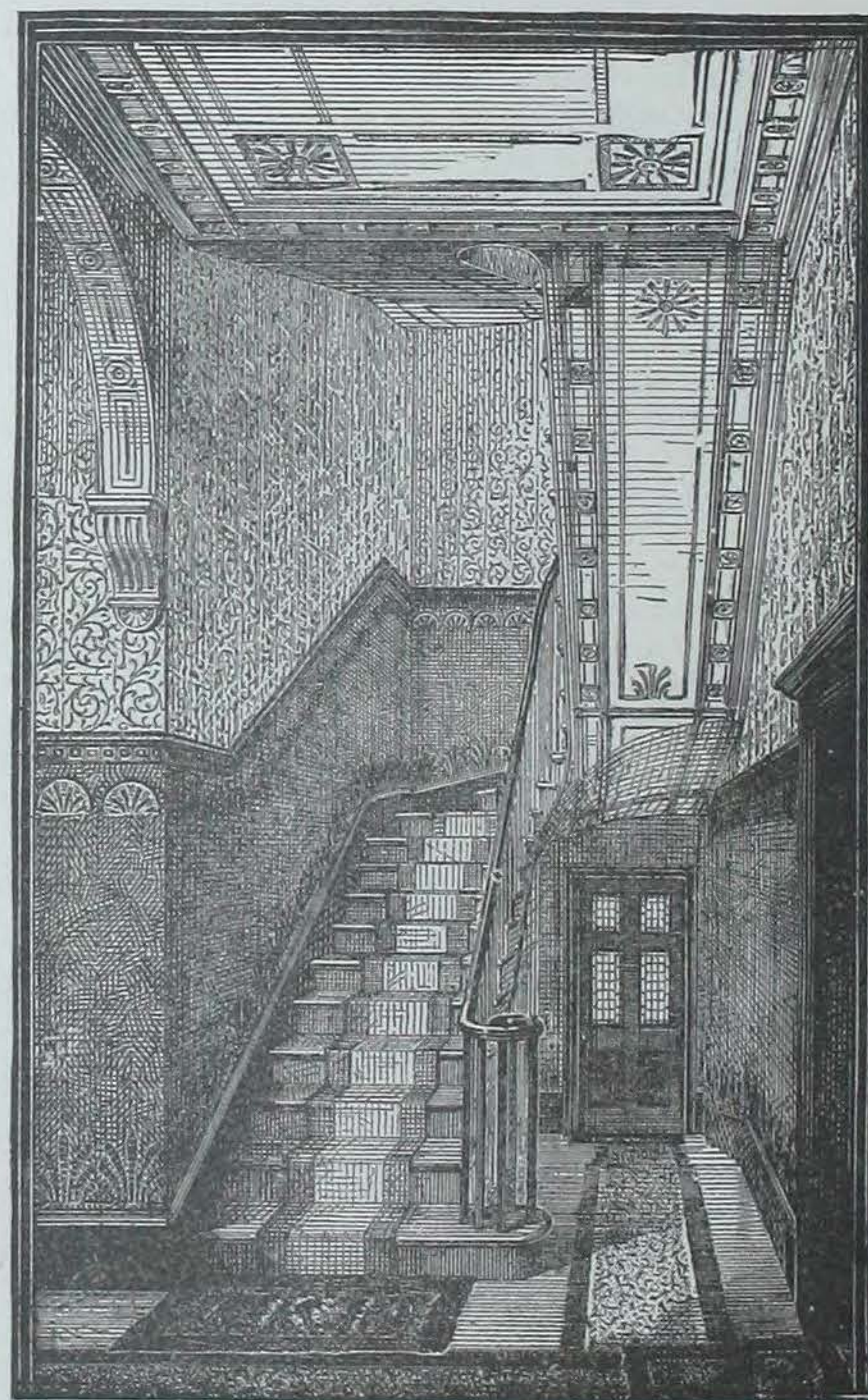
There can be little doubt that for the floor of a hall nothing surpasses the encaustic tiles now so popular. They are easily kept clean, are cool, and afford an occasional relief from the hot carpeted rooms, and they are everlasting. The expense incurred in putting down a tiled floor is, however, a rather heavy item; and as the tiles cannot be removed without replacing the original floor, it is not worth doing unless we are sure of remaining in the house for a number of years. Next to a tiled floor the old-fashioned oil-cloth is to be preferred, even to the more recent inventions of linoleum, and various compounds of cork and india-rubber. None of the latter have the smooth brilliant surface of oil-cloth, although they possess a greater softness and elasticity.

There is room yet, in spite of the variety of patterns in floor-cloths, for some improvement. The favorite tile patterns are frequently very happy combinations of color, and have a pleasing effect. The imitation will, however, grow wearisome soon, and what are wanted are designs peculiar to floor-cloth itself, and not a pretentious imitation of something costlier.

Too many colors should be avoided, as also too small and scattered a pattern. Greater breadth of effect is obtained by a moderate uniformity of color, such as chocolate and buff, Indian red and buff. The once much-used black and white marble floor-cloths are too gray and gloomy to suit the advanced love of color among us, however they might have satisfied a previous generation. Matting, of course, holds the dust, and if fine will scarcely stand the rough wear of an entrance-hall.

One sees Brussels carpet used not infrequently, but it is unsuitable, considering the inevitable dust and traffic to which it is subject. It may be very charming to have a noiseless floor-covering over the hall, on which no footsteps reverberate, but a hard cool floor in this part of the house is probably better.

A word concerning the stairs, which from their peculiar elevation, are unavoidably noticeable, sometimes distressingly so, when they happen to face the entrance doorway. These form an integral part of the hall, and in many old houses the broad staircase, with its massive hand-rail and balustrades, is a remarkably handsome feature. Nowadays, when space is costly, the staircase has to be cramped into the closest possible compass, so that it behooves us to do our best to mitigate the effects of this economy on the part of the builder. Nothing detracts more from the appearance of a hall and staircase than a narrow, mean stair-carpeting. Aim at a broad effect in the stairway. Axminster, Brussels, or self-colored felts are the best for the purpose, and should cover the stair with the exception of a narrow margin on each side, which may be painted cream-white or stone color, or darker shades if preferred, or if the wall decoration seems to require it. The stair-carpet should, of course, be carefully chosen to harmonize with the given scheme of the staircase and hall.



SIMPLE DECORATION FOR AN ORDINARY STAIRCASE.

The invariable "Sienna marble" paper has its merits, presenting a mellow tone, neither too dark nor too hot—qualities, however, which may be obtained in greater variety without the meaningless representation of marble halls and staircases in houses otherwise built of brick and stucco. Paint is perhaps the best for a staircase; or the lower wall may be painted to a height varying from three to five feet, and the upper part colored, in distemper, a lighter tint than the lower part (or dado). A dividing line, darker still, should be struck between the two portions, and the wood-work (doors, skirtings, etc.) should be painted in dark corresponding tones. But if it is desired to paper the hall and staircase, there are now papers to be had of special design for the purpose, which may be either varnished or not, or the lower part only varnished.

As to the colors most suitable, that will depend in a measure on the amount of light obtainable. The staircase is a passage, not a dwelling-room, and admits of lighter treatment, inasmuch as we have not to consider the effect of the walls as a background to persons or things. We incline to an effect of coolness and airiness, combined with a pleasant softness of tone. If patterned, the pattern should have a softly stencilled effect and not be obtrusive.

On the other hand, since the staircase is not subject to the restraints imposed upon the other apartments, a bolder and more vigorous treatment may be adopted. The architectural features, for instance, may offer facilities for effective decoration, and your hall and staircase may present charming glimpses of classic or mediæval periods; or we may find ourselves surrounded with imagery of tropical luxuriance while the forms and fragrance of real plants will complete the delusion. Only, the apartments must be sumptuous in proportion, or our expectations will be raised, to be disappointed further on. In a general way, however, the staircase will claim only a moderate share of attention.

Creamy yellow or buff, pale fawn, pale salmon, or light tones of Indian red, pale sage-greens, turquoise blue, are among the tints to be recommended. Grays are apt to have a gloomy effect, unless relieved by pictures or prints. For yellow or buff walls, the dado and woodwork may be chocolate or olive-brown, or a dark-blue toned down with black. For pale-salmon, dark bronze-green. For pale sage-green, either darker tints of the same, or dull green-blue, olive-browns, or Indian red. With turquoise-blue, chocolate will contrast best, or maroon.

Take care not to let your entrance (or hall) overpower the rooms which are entered from it, but let it be subordinate, and leading up to the colors of the reception-rooms.

CHAPTER III.

THE DINING-ROOM.

One or two considerations meet us at the outset in considering the dining-room. Is the room intended to be used solely, or chiefly, for the purpose of dining? or is it to constitute dining-room, morning-room, breakfast-room, and library in one? In fact, is the greater portion of the day to be spent in this room? If so, let us treat it accordingly, and not hamper ourselves with restrictions as to what is the proper and usual mode to observe in the treatment of a dining-room.

For a dining-room, as such, a certain richness and heaviness of decoration is not unbecoming. Where oil paintings are hung, plain sage or olive green, or dull red walls make a good background; these may be painted, or suitable papers are to be found. Pompeian red has been considerably used, and is very effective with black woodwork. There are likewise the French leather papers, Japanese and real leathers, painted canvas, or even some of the printed cretonnes, and a variety of means open to those who can afford them of covering the walls, all of which however demand, for their rightful carrying out, a panelled dado, painted, or left in the natural wood.

If, however, the room is to be both dining-room and sitting-room, we would have a less conventional treatment. There should be a warmth and quiet cheerfulness, an air of sprightliness and yet repose, and, above all, an absence of monotony. And here we do not think the end can be better answered than by the judicious employment of some of the really decorative papers that are being produced just now. In some of these there is a variety of outline and a blending of subtle tints, which, while forming a comparative monotone against which pictures and objects may stand out, afford, in their absence, a singularly fascinating study for the eye, without being wearisome or over-engrossing. Harmonizing or contrasting dados are usually made for these papers, which heighten their effect, and at the same time, help to break the line of the wall against which the furniture stands. A dado should be higher or lower than the middle of the wall (usually lower), but must never cut the space into two equal parts. The dado and skirting should not be less than three feet six inches high. No rules can be laid down for the colors to be employed here. If the conditions before mentioned are borne in mind, we do not know that we need limit the use of any subdued tints or well-balanced combinations. The position of the room will again govern the warmth or coolness of the colors. If the ceiling is not decorated, at least there is no reason why the dead chalkiness of the whitewash should not be relieved by the admixture of a little ochre or lake, or other color harmonizing or contrasting with the walls. Excepting with very light walls, a toned ceiling is much more agreeable than pure white, and costs no more. The tinting of a cornice, ornamenting a ceiling with bands and lines of color, requires care and some little skill.

As regards the woodwork, the time-honored fashion of graining in imitation of natural woods can only be defended on the score of durability, and the facility with which it can be patched and touched up. Plain colors, harmonizing with the

wall colors, are preferable, or even a coating of varnish alone, where the joinery is fairly good. If paint, it can be varnished, which is most lasting, or finished with an "egg-shell gloss."

In room decoration, and in a dining-room especially, a broad massing of colors is far more effective than two much fussy "picking out" of mouldings, and elaboration of delicate lines and arabesque ornament, which, at a little distance, are, for all practical purposes, lost, or worse than thrown away. As for mouldings and projections, it is doubtful whether the labor expended in tinting these produces, in many cases, so good an effect as if they were left to the natural play of light and shade.

Having decorated the walls of the dining-room, it concerns us now to study the various pieces of furniture required, their positions and proportions, so as to leave room to move about; of what kind of wood, and consequently color, they shall be, and of what their coverings; also the color and texture of our carpets.

First of all as to the wood. If the walls are dull red you may have ebonized wood, or light oak, or very dark oak, but we cannot recommend mahogany, which is a kind of red orange, nor walnut, which, unless artificially darkened, is too weak a brown against red or crimson. Mahogany or walnut stands well against sage or olive-green, or dull gray-blue. Before deciding, however, on any particular wood, it is best to try the effect of it against the papers you intend to choose for the room.

The furniture of a dining-room should, of course, be more substantial than that of the drawing-room, and most people will agree with us in claiming for this room at least a degree of simplicity, if not austerity. Redundancy of ornament, a lavish profusion of carving and scroll work, together with arabesque forms of decoration, introducing bunches of grapes and devotees of Bacchus, may be suggestive of unlimited feasting, and suitable to civic banqueting halls. But we are not always feasting, and the maxim that "man eats to live," is better represented by a plain, substantial, and homely kind of furniture, which, by its very simplicity, enhances the viands placed upon it. Nor need such furniture be wanting in beauty, for we would have it exquisitely proportioned and adapted to the wants of a dining-room; and, albeit simple and severe in outline, it need not lack grace and refinement, nor, if desired, costly though unobtrusive and judiciously restrained enrichment.

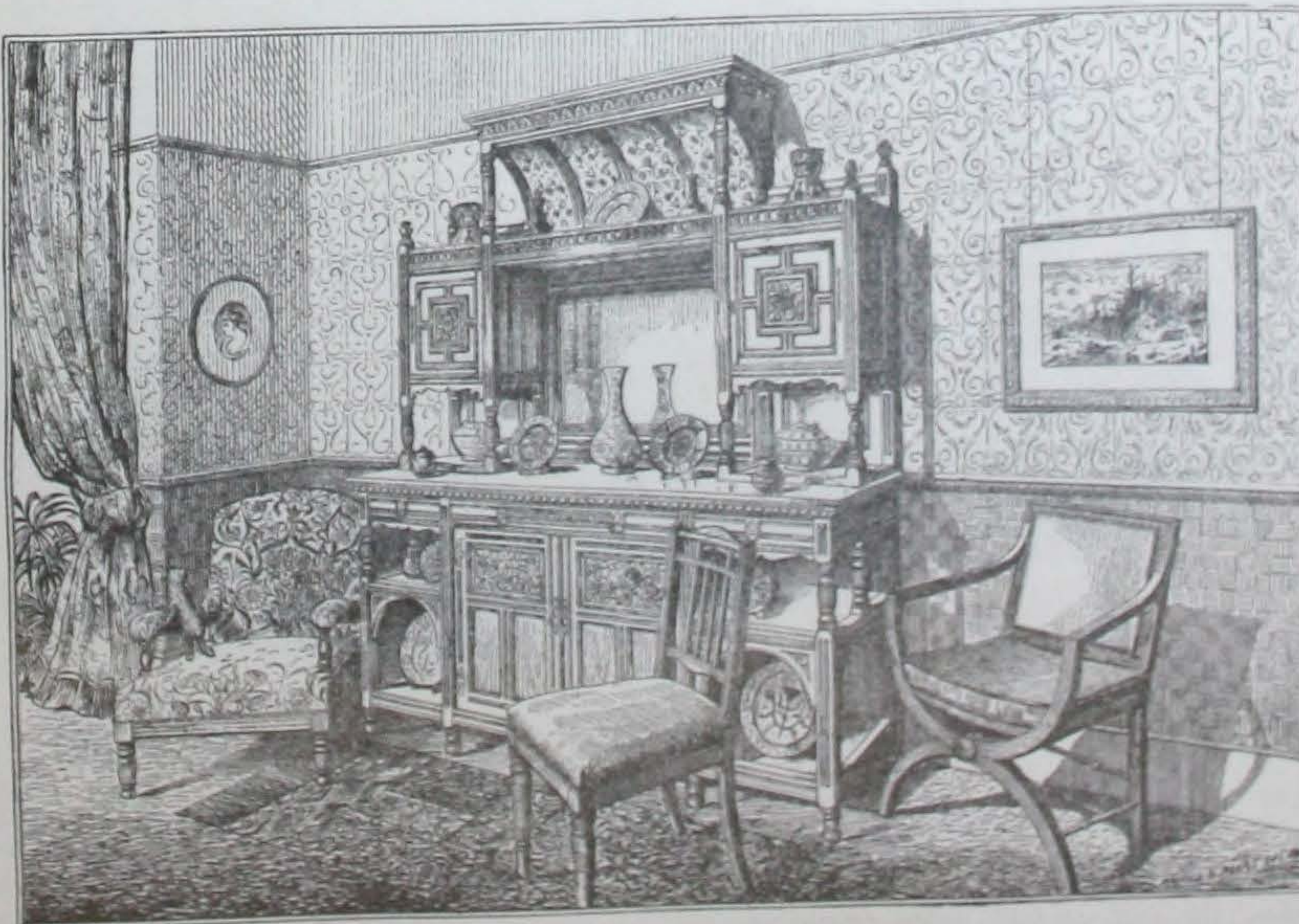
In the choice of a sideboard every one must be guided to some extent by his individual tastes. If you have no old china worth showing, do not have a sideboard with a lot of useless shelves. If you like plate glass you may have a good strip of it running the whole length of the sideboard—not too high, say twenty-four inches for an ordinary room. If this is inserted in a frame, so as to stand some inches higher than the sideboard top, it will give all the reflection that is needed. It is better for lightness and variety of effect to divide the plate into three—the centre piece being longer than the end pieces. A bevelled edge is a great improvement to small pieces of plate glass, and gives a gem-like lustre and completeness to the glass. Tiles, painted

leather, and carving in low relief, are all effective additions either to a sideboard or a cabinet, but they require taste in adapting, and should always be subservient to the general aim of the work they are introduced upon, and never disturb the unity of the whole. Above all, ornamental details of this sort require to be well executed, and special knowledge and aptitude are necessary to make a good painter of tiles or decorative panels, as a perfectly natural rendering of either figures, flowers, or fruit is too obtrusive a mode of treatment, and brings the objects into undue prominence, thus producing a broken, scattered effect.

In choosing a sideboard, give the preference to straight lines—curves in the constructive lines most surely denote weakness, or occasion loss of room. Round-cornered furniture is perhaps a little less dangerous than square with small children, but this is its sole advantage. Avoid lumps of carving stuck on. They are easily detected, or if you are uncer-



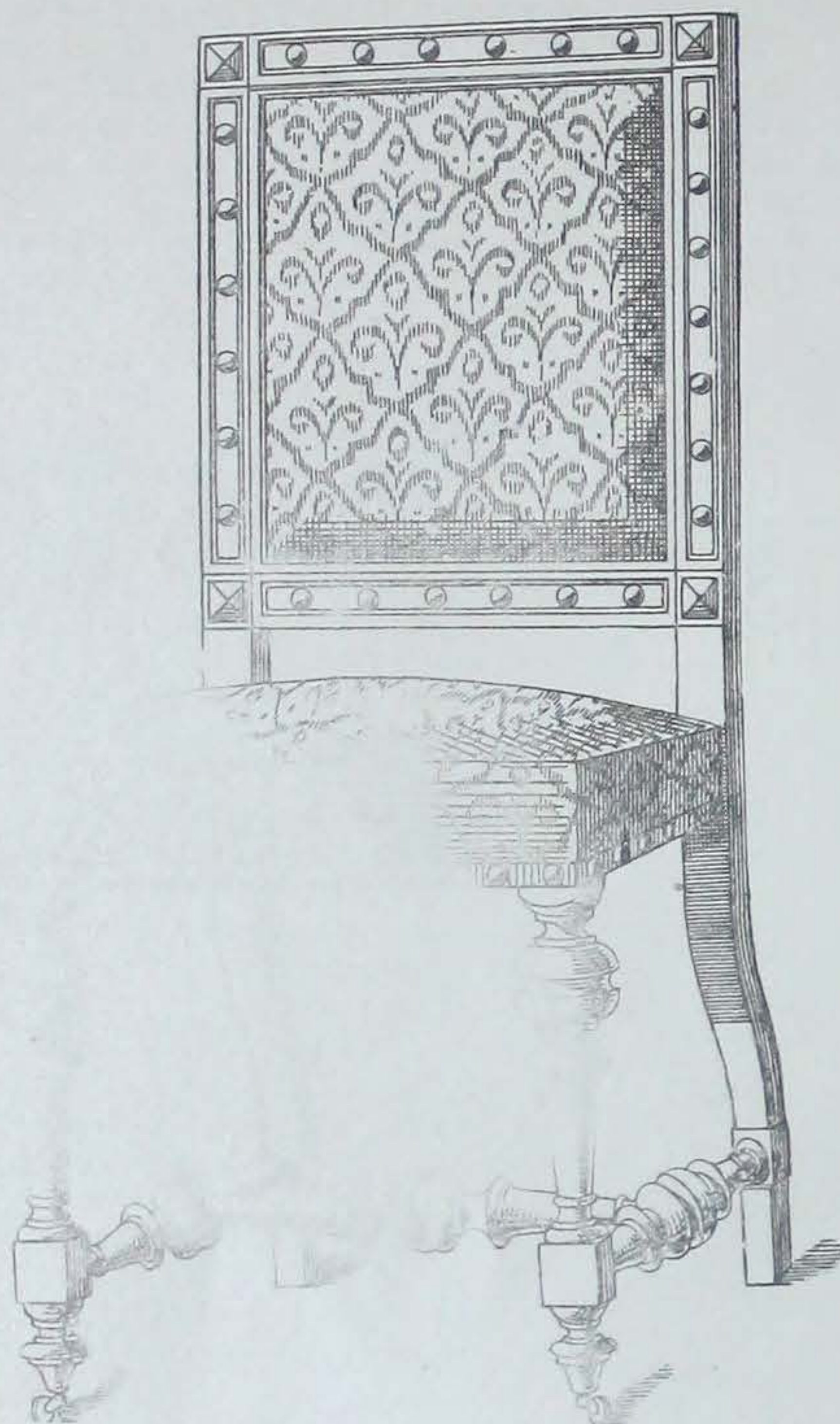
SIMPLE DESIGN FOR A SIDEBOARD.



A DINING-ROOM SIDEBOARD.

tain, ask the salesman about them. If he knows he will scarcely fail to tell you. See that the doors and drawers are sensibly arranged, and show themselves for what they are, and are provided with handles by which to open them. The key is a bad substitute for a handle.

The illustration "A dining-room sideboard," shows a dining-room buffet which comprises the requisites of a sideboard for general dining-room use, with shelves for china and glass for dinner and breakfast service, cellaret for wine, drawers for table



DINING-ROOM CHAIR OF POOR DESIGN.

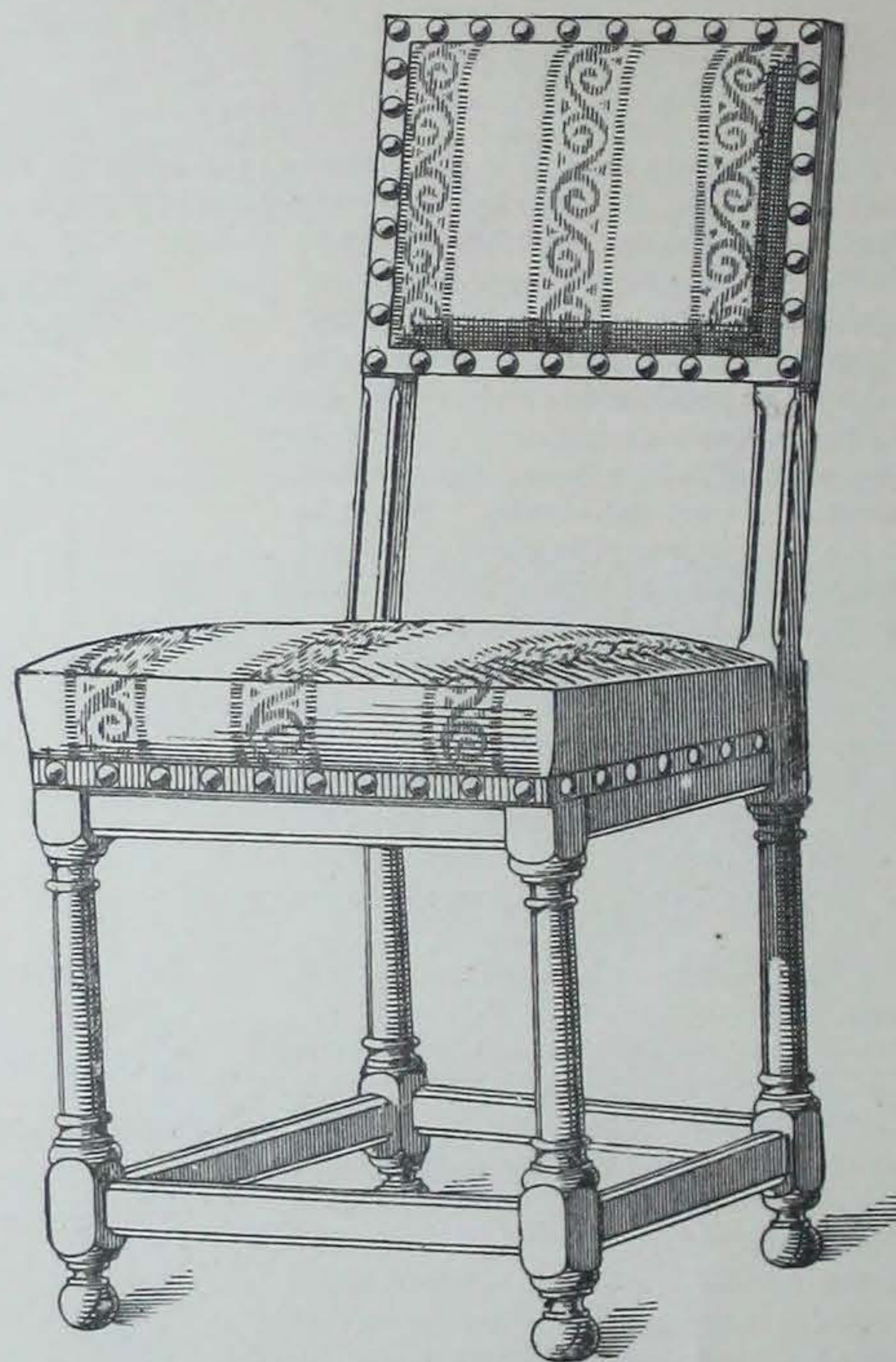
linen as well as for drawings or instruments, and cupboards for papers. The glass is of sufficient size to lighten up the room. Such a buffet as this, made simpler in design, would answer all necessary purposes. The same illustration shows an arrangement of a simple matting dado, with paper centre space for pictures, and a plain-colored distemper frieze over divided by a small moulding or picture-rail.

Of the remaining two sideboards shown in the pictures, the upper part of the narrower one has stained-glass doors, providing a rich effect when the light strikes it.

Besides the sideboard, there are the table, chairs, sofa, and chimney-glass, all of which must harmonize with each other and with the sideboard, though not to the extent some people seem to think, there being something painfully stiff in the too precise matching of each piece of a "set" of furniture in a room. A small table or fancy chair or cabinet of a different though not discordant wood and color, is often a great relief in a room otherwise furnished to match.

Take care to get the best proportion and sizes possible for your dining-table, as much comfort depends on this. If the top is too narrow, plates and dishes will be huddled together; if too broad, the room space on either side will be infringed upon. The length of the table when closed should not be too great, or it will be cumbersome to move, and the extra leaves should be of convenient widths for extending the table to various lengths. In a squarish room the table need be only a foot or eighteen inches longer than broad. In a long room the length may be increased to suit the wants of the family and the look of the room. Half-circular ends to a table may make a more compact dinner party, but we prefer a square or parallelogram with the corners slightly rounded.

A dining-room chair should be strong, not too heavy to move, and comfortable. The seat should be stuffed. A good horsehair stuffing makes a wholesomer seat to our mind than soft yielding springs. The back may be stuffed or not; it does not so much matter for comfort whether it be of padding or wood, provided support is given to the spinal column of the sitter, for which purpose the back of the chair must not be too upright. Care should be taken also to have the seat of sufficient depth. An easy chair, as every one knows, is often a mockery. Sometimes, however, it happens that we get a real easy chair, and even then find it does not suit us. The truth is, a chair intended solely as a luxurious lounge is



DINING-ROOM CHAIR OF GOOD DESIGN.

ill-adapted for steady and prolonged reading; while a chair in every way perfect as a comfortable reading arm-chair, will not conform to our wishes nor bend itself to our shape when we throw down the book and slack every tendon and ligament in our body. The two things are not compatible except in a mechanical adjusting chair, but this reminds us too closely of the dentist to be usually agreeable.

The best material for covering dining-chairs is undoubtedly morocco. There are inferior dressed skins, sometimes very difficult to detect from the real thing. If you wish to get morocco, stipulate for it in unmistakable terms. If the salesman assures you a chair is covered in "best leather," you may be sure it is not morocco, but roan, which has not the wear in it, though very similar in appearance. Utrecht velvet will wear longer than anything else, but it is hot, and clings to one's garments. Morocco skins may be dyed almost any shade. Deep madder reds, fine browns, and olive-greens are now mostly kept on hand by the leather merchants, and are useful colors for furnishing.

By far the most useful form of sofa is that in which the back and two ends are on a level (on the same line of elevation). It may be convenient to have one end rather higher than the other, but this

raises a difficulty in the outline of the back, and will not make so good an appearance. All elaborate contortions in the shaping of sofas or couches should be avoided; they are always in bad taste, and where there is a margin of wood to show, render it exceedingly dangerous to attempt to rest the head, for fear of coming into collision with one or other of these abnormal bumps.

There is no objection to a good-sized chimney-glass over the mantel-piece, provided the



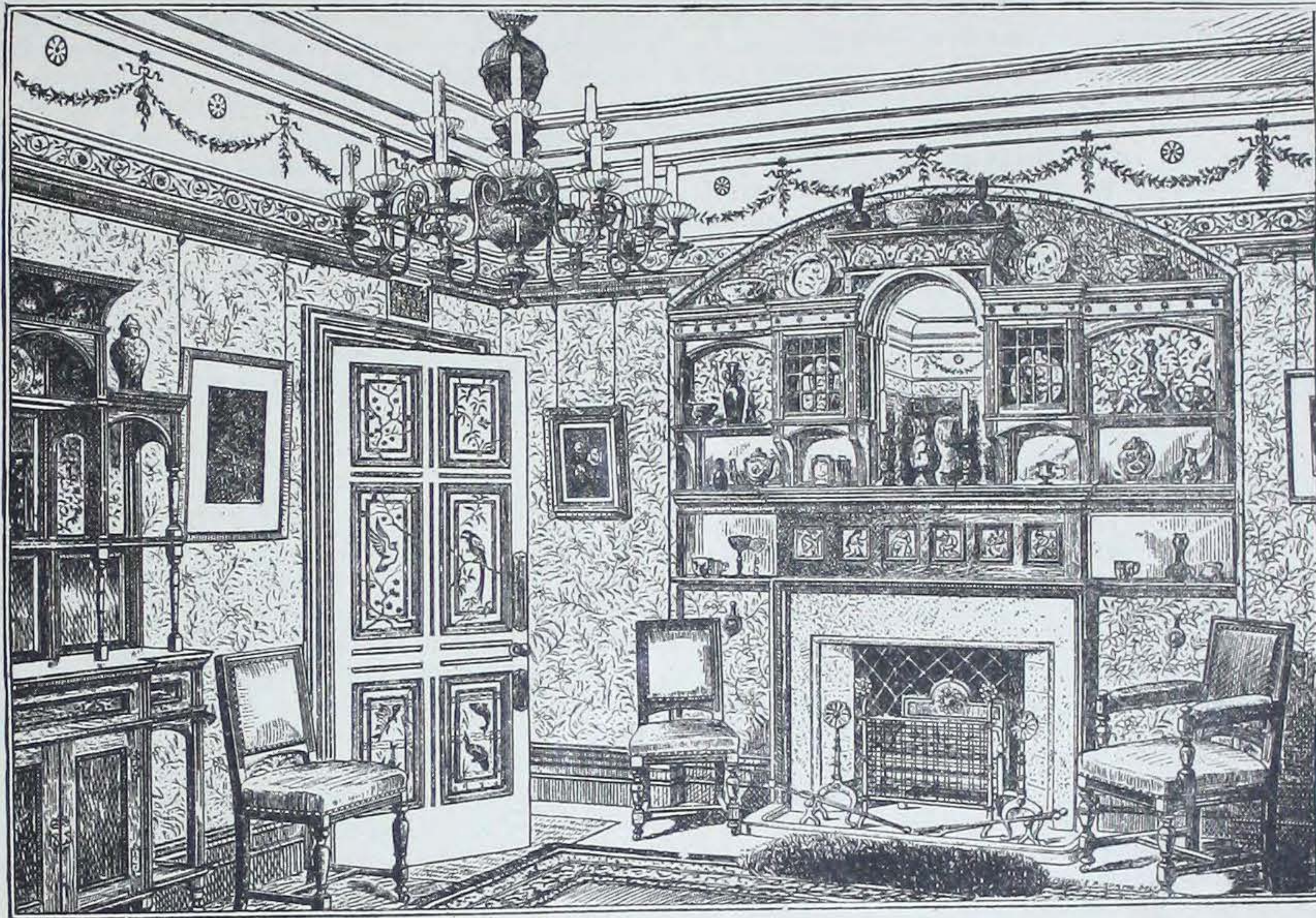
SIMPLE DESIGN FOR A SIDEBOARD.

frame is not all gilt. It is much better taste, and adds to the quietness and dignity of the apartment, to have the frame of wood, relieved with gilding, or black, or other inlay or staining.

It will be patent to most of our readers that there has been a style of glass in vogue of late, which is not so much a glass as a combination of bevelled mirrors, small shelves (supported on brackets or columns), and gilt or painted panels, and which may be termed part cabinet, part glass, having for its main object the felicitous display of old china and knick-

most floors are so rough and the boards so far apart, leaving yawning cracks between, that it is labor lost to attempt to get anything like a decent polished surface.

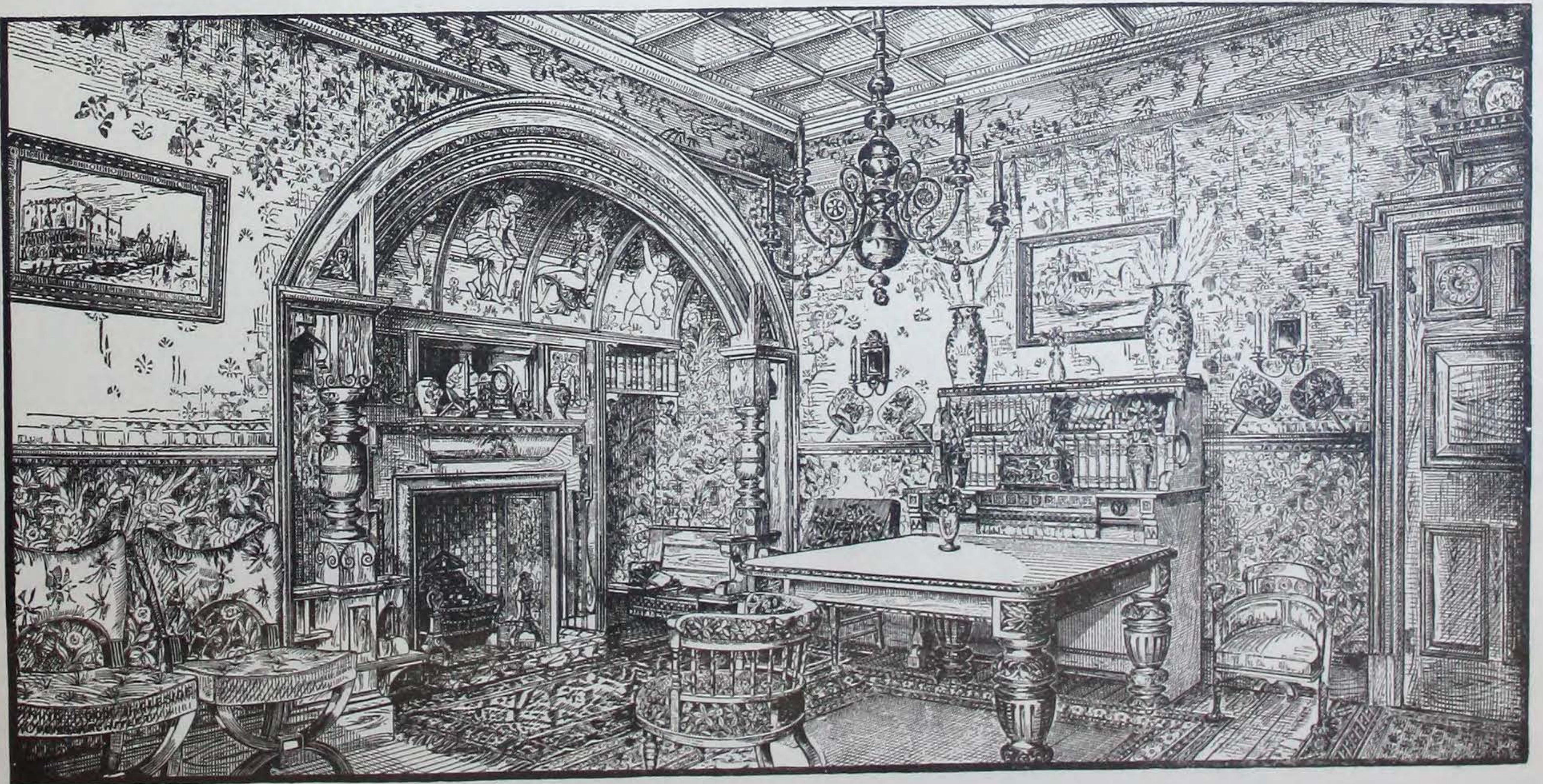
We protest, however, on many grounds, against covering a room all over with carpet, and nailing it close into the corners and recesses. It harbors dirt which can never be thoroughly swept out, and it renders the process of taking up the carpets unnecessarily troublesome and expensive, so that they are left down for, perhaps, a year or two, whereas it would be conducive to health if they were shaken more frequently. A margin of not



DINING-ROOM FURNITURE AND DECORATION.

knacks. There is some sense and a good deal of fashion mixed up with the idea. If well arranged, and with a view to the ornaments in store for it, the thing may be quaint and effective, and the bits of mirror made to answer every purpose by being brought sufficiently on a level with the reflected beauty of the lady of the house. Besides, a bird's-eye view of the room can be had in a comparatively small mirror which is really more impressive than the image of a broad expanse of wall or ceiling.

less than fifteen inches (eighteen inches or two feet is better) will not contract the apparent size of your room very materially, and you can then have a square or oblong carpet, with a border either made in one, as a "Turkey" or "Axminster" carpet, or seamed up as in a Brussels. A Turkey carpet should not be so large as to go under the furniture, but should stand clear of it. With Brussels it does not greatly signify, as the substance is much thinner. Brussels carpet is, without doubt, the cheapest and best wearing for



A MODERN ENGLISH DINING-ROOM.

As for the floor, we advise you, if you are likely to remain in the house, or if it is your own and you can afford it, to put down a border of wood parquetry. Colored India matings are sometimes used; or the floor, if at all good, may be stained. The pity is that

ordinary purposes, though for a dining-room a good Turkey carpet will prove in the long run an economical investment; and the difference to the tread is so great, that if once we get accustomed to it a Brussels carpet henceforth loses its charm.

From an art point of view, a carpet cannot be treated otherwise than as a background to the furniture, quite as much, if not more, than the walls, excepting in a room where no furniture is where alone we could tolerate those gorgeous Aubusson carpets (looking like a magnificent dessert-plate), with a large expanse of white ground, and boquets, wreaths, baskets, and what not in the centre and borders. Indian and Persian carpet-weavers are still our masters and teachers in the art of combining colors, so as to form one harmonious plateau of bloom. We do not, however, object to a pattern being in some degree marked and obvious, or to a geometric design, if not too hard; but avoid a carpet where the lines or patterns cut it up into detached fragments and spaces, destroying all sense of unity and breadth, which in a dining-room are specially desirable qualities. The border is sometimes better for being clearly marked off from the centre carpet, instead of flowing into it.

The window, or windows, as the case may be, next claim attention. Ordinarily a small neat brass rod or pole, with simple spherical ends, is a rational and effective termination to the window curtains, proclaiming its use, and giving a quiet brilliancy where the light often strikes least. Singular fancies have been perpetrated in the matter of cornice pole-ends, but the strange hallucination that bunches of tin grapes are the natural product of a rigid brass pole, has by this time, we hope, been exploded. The thin brass stamped cornice is also a flimsy and unworthy contrivance, and produces unpleasant sensations, similar to those evoked by the contemplation of conspicuously false jewelry. Light wooden poles, to match the furniture in color or black, with very little gold or color (say Indian red or vermilion) introduced, are suitable. A gilt cornice in a dining-room is equally out of place with the gilt chimney-glass. A wood cornice picked out with gilding is better.

A few words on curtains. Look round your room. If the carpet and walls are full of pattern and various colors, the curtains will be best of one color only, or two shades of the same color. There must be repose somewhere in a room. If the curtains are full of pattern and color, the walls or the carpet should be quiet. Longitudinal stripes in a curtain may give height, but they add no grace, and you lose the variety and play of effect on the folds which is obtained by horizontal or cross stripes. If a curtain is bordered, the border should never cross the top of the curtain, but only run on the two sides and bottom. It often happens that curtains of some plain self-colored stuff, serge, cloth or velvet, produce a better effect than any variegated material.

Curtains of some quiet, soothing hue, hanging in natural folds, catching the light on their edges, and deepening away into richer shades of color, will sometimes give a singularly simple and artistic finish to a room, otherwise tastefully furnished, which the most elaborately wrought hangings would fail to effect. This is the more striking where the landscape or outlook is rich in natural tints and forms, for then the view is heightened by the quiet unobtrusive color of the curtains which practically frame it in. With narrow windows, the French style may be adopted of letting the curtains meet at the top, and then drawing them sharply away to each side, and confining them with bands of the same stuff, at the height of about four feet from the ground. The fashion is artificial, however, and with wide windows should not be attempted.

The dining-room of which we give the illustration "Dining-room Furniture and Decoration," is by Mr. Robert W. Edis, of London, a gentleman well known as a writer and lecturer on domestic art. It is an example of simple treatment for wall decoration and furniture. The mantel-piece, with the étagère over, is made to form an important feature of the general design; the wall space is divided by a high dado or picture rail slightly moulded with half-inch gas piping under, as a picture rod. The frieze is painted in a plain vellum color, and decorated with stencil pattern enrichment. The woodwork generally is of pine varnished, the panels of the doors and shutters filled in with stencil decoration in a light shade of brown under the varnish. The general wall surface is hung with an all-over pattern paper of warm golden brown admirably adapted for pictures. The furniture throughout is executed in Spanish mahogany, and designed to harmonize with the general character of the decoration.

"A Modern English Dining-room," pictured herewith, is remarkable not less for its richness than its suggestions of comfort. The attention of the reader is directed to its alcove fireplace and open grate, the settees on both sides of the fireplace, the rugs scattered about the room, and the arm-chairs, which are inviting and exceedingly artistic in design. The shelf over the fireplace suggests very pleasingly the combination of the useful with the beautiful.

We sum up the hints on the furnishing of a dining-room by a short description of a room we have in our mind. The walls, above the dado, are papered with an olive-toned paper, or rather, the ground is actually a very dull slaty-blue, over which are trailed the stems and leaves of the orange tree, with the rounded fruit in various sizes and stages of maturity, from the tender green to the warm orange-yellow. The soft amber-white blossom of the orange tree is interspersed, and little birds in azure plumage peep in and out among the leaves and fruit. The whole coloring, however, of this paper is so deliciously cool and subdued, that scarcely one thing stands out above another, so that it is some time before you grasp the whole of the design; and when you have made it out, it is not easy to trace the repeats in the pattern, so cleverly are the details varied and interwoven.

Below this is a dado of plain flock paper of a deep crimson, almost ruby tone, and divided off from the upper paper by a broad black and gold line. The dado paper is not put on in widths, as the joinings are sure to show more or less in a plain flock, but is run in one continuous length around the room. The ceiling is toned down to a deep cream color.

The furniture is of light oak, of almost primitive simplicity of form, but substantial and useful, and not too large for the room. The sideboard has no glass, but a shelf runs along the low straight back, on which stand various pieces of plate and glass, in daily use, an old silver urn of exquisite classic form being a prominent object. Over the mantel-piece is a low mirror framed in oak, and with a shelf above, on which stand a few bits of Oriental china.

The chairs and couch are also of light oak, rather severe in style, with seats stuffed moderately hard in brogue green leather, which contrasts well against the deep-red dado. The chairs have a stuffed cross-piece or strap about eight inches broad across the back, and we think would be improved by another rail of some sort midway, as a support to the back. There is an arm-chair, with a rather upright back—very comfortable to read in, and provided with a wedge-shaped cushion, to render it more easy as a lounge—and also another chair with arms, a kind of writing-chair, of a somewhat pontifical shape, quite out of order

with the rest, though in the same wood, and somehow or other seeming a kind of relief. A small round table in a dark figured wood—pollard oak or amboyna—likewise forms a pleasant variation.

The carpet is Brussels, Persian in style, and composed of various colors, including red, blue, green, and orange, the bloom color at a distance being a kind of rose-purple. This carpet has a distinctly marked border, and is oblong in shape, except at the window end of the room, where it runs into a three-sided bay. The floor margin round the carpet is covered with linoleum, printed in a clever imitation of wood parquet which, although we cannot defend it in principle, has an excellent effect.

The curtains (it is summer time) are some unbleached copy of guipure lace in squares and diamonds, with a scrolled border, and suspended from a small brass pole, which is carried round the bay window.

A brass gaselier, evidently copied from an old Flemish model, hangs from the centre of the ceiling. In defiance of the conventional etiquette that banishes books from a dining-room two small book and china shelves, capable of holding some four dozen small volumes, fill in the space of wall on either side the bay window, and brighten up a dark nook. There are no pictures on the walls; they are not needed, although the paper is subdued enough to admit of them.

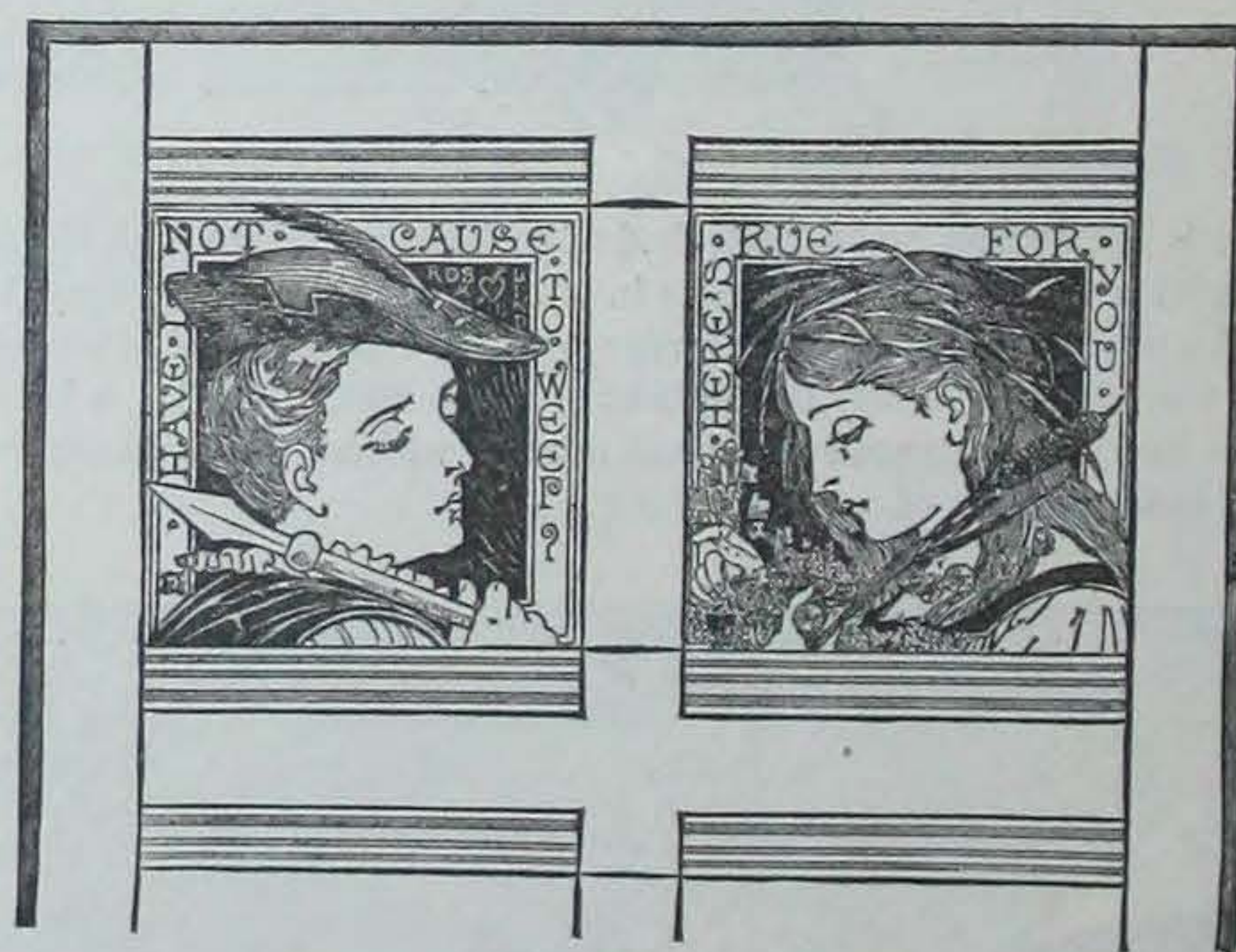
The entire effect is that of a quiet and comfortable, home-like room, with nothing of dullness or monotony; and the warm dado adds a richness calculated to counteract the depressing influence of the gloomiest sky. The whole thing, moreover, is in good taste, and any ruffled feelings which you might have had on entering must involuntarily be smoothed down before you have been seated ten minutes.

CHAPTER IV.

THE DRAWING-ROOM.

This room claims special attention. Here "beauty, sweetness, and light" are to culminate. The purpose of a drawing-room is relaxation and social enjoyment. Other rooms are, so to speak, work-rooms, and take their tone from the necessary pursuits to which they are more or less set apart; but in this room fancy reigns supreme, unfettered by the weightier cares of life. Whatever of poetry, of art, or of culture there is in us will manifest itself in the fittings and accessories of the withdrawing-room. And, first, as to the walls.

A similarity between the dining-room and drawing-room should be avoided. As the transition is usually from the one to the other, it is best to seek a pleasing contrast of color. Gray, or white with gray or gold is, of course, a safe medium, as it presents no difficulties



CABINET PANELS.

in the way of after-furnishing, but, at best, it is tame. If the dining-room be red, you may have a cool green tone for the drawing-room; or if the former is green—say, olive or sage—a pale salmon-pink hue would make a good contrast. Or something between harmony and contrast is obtained by opposing olive-green to a pale turquoise or Nile blue. Pale lemon yellow is another tone that ought to be more frequently used for drawing-rooms. This, or a fuller apricot-yellow, is most effective with black woodwork, and nothing can light up better than the former.

The following table shows a few of the colors that may be safely used for the dining-room and drawing-room, and the relation in which they best accord:

DINING-ROOM.	DRAWING-ROOM.
Dull red.....	{ Gray blue to turquoise. Pale sage-green.
Dark olive or sage.....	{ Salmon-pink. Pale apricot-yellow. Turquoise or Nile blue.
Dull peacock-blue.....	{ Lemon-yellow. Citrine.
Chocolate or fine browns.....	Pale blues.

This employment of varied effects of color throughout a house is strongly advocated, as a vast amount of pleasure and satisfaction will thus be derived. These contrasts may also be used for the dado and upper wall of the same room.

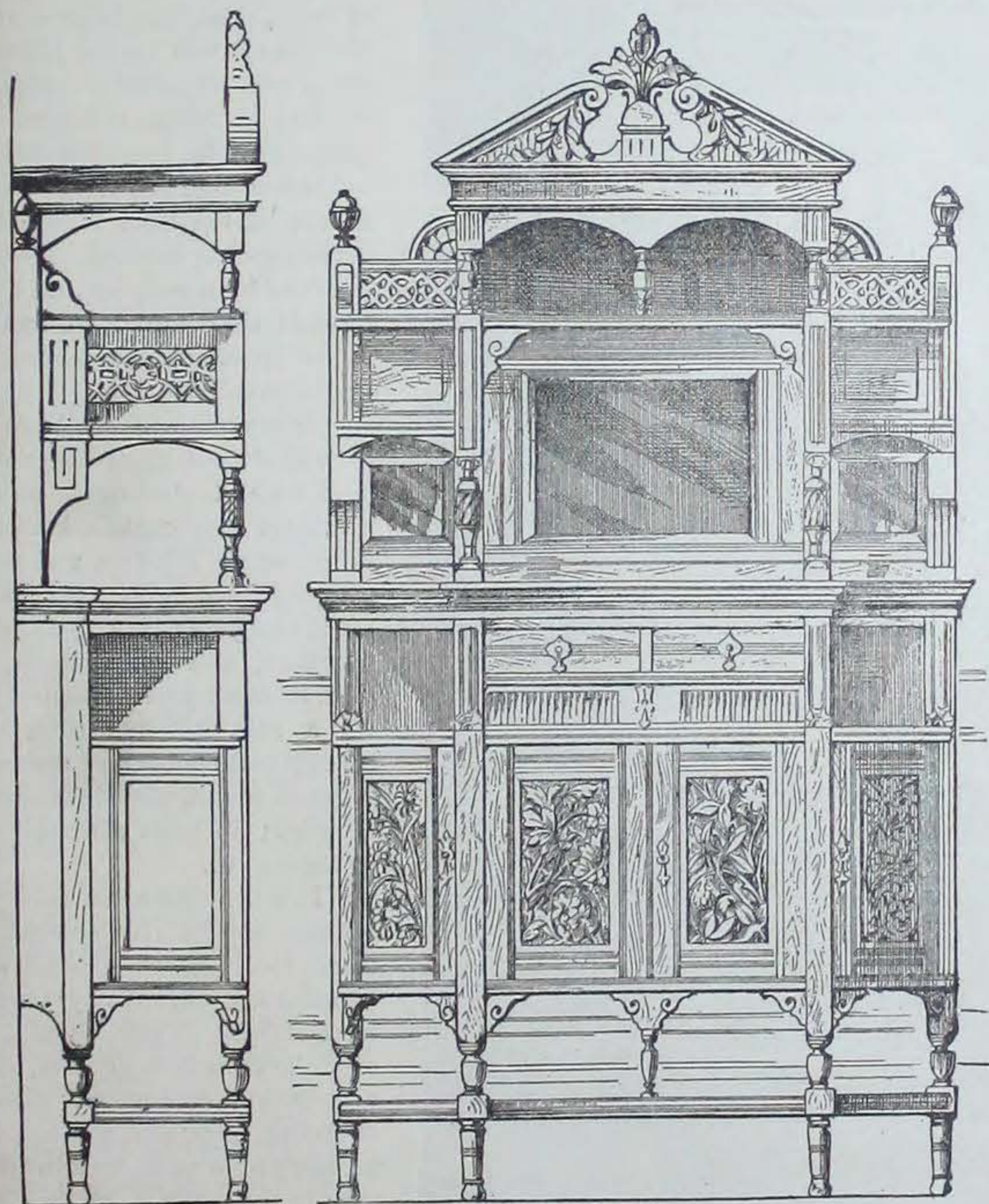
It should be borne in mind that in speaking of the color of a room it is not necessarily meant that the walls are of one simple tint or wash of color; the pattern and coloring may be complex, and yet there may be one predominating hue which shall give the tone to the room. A well-mixed Indian or Persian carpet will contain an almost endless number of colors, and yet there is often one predominating tint or "bloom," and this effect may be obtained also in wall-paper.

It is noticeable that the drawing-room, however other rooms may have escaped, has mostly been the scapegoat upon which the sins of taste and fashion have been laid. As regards the hall there has been no need to alter the hard outlines of the accustomed furni-

ture, neither visitors nor owners being wont to rest long there. The dining-room has mainly been let alone, on the ground of long association and the somewhat unalterable nature of its requirements; but the drawing-room (from a perfectly allowable assumption that here taste may be permitted to express itself) is generally the room in which everything irrational and despicable is carefully crowded together. Specially to be condemned is the unthinking use of large masses of gilding and glass and marble; of patchy, realistic bunches of flowers on walls and carpets; of light, flimsy, ill-constructed chairs and tables that will not fulfil their purpose; and of luxuriously debilitating puffy sofas and chairs which our ancestors would have scorned. At times a chair or sofa of this sort may be a boon, but for every-day use and for long sitting in they are highly objectionable.

As for gilding and plate glass, the essential vulgarity of their immoderate use is fast being perceived. It is hard to understand the preference given to white marble in dwellings. It is cold, and uncongenial to the eye and to the touch; and for furniture, colored marbles would harmonize better.

As a matter of course, in the decoration of the house the drawing-room has frequently come off worst. A favorite wall-paper lately has been a white or gray, plain or watered ground, with a stamped and gilded bunch of flowers, or a huge "fleur-de-lis" at regular intervals, the bunches of flowers presenting no better effect than might have been got with a splash of liquid gold from a brush, directed on the most rudimentary geometric plan. A picture hanging on such a wall generally cuts into three or four of these gilded nosegays. Of course, with a smaller pattern studded more closely, the effect is not so bad. Another fashion is to divide the walls into panels, with a border, and a gray or other plain tinted margin. There is not much to be said against this plan, except that in rooms of moderate size



SIMPLE DESIGN FOR A CABINET.

it destroys the breadth and unity of the whole. It affords, however, the opportunity for a delicate filling or panel, and a border of either a geometric or a conventionally-flowered pattern of any variety of coloring. The dado and upper paper, with or without a frieze above, give the room a continuity which it lacks in the panelled method.

In either case wall accommodation is provided for pictures, though the unbroken length of wall must be acknowledged fittest where a number have to be hung, as it is extremely difficult to arrange odd-sized pictures on walls already cut into square or oblong spaces.

The writer has in mind a drawing-room, the principal walls of which are covered with Italian lake scenery, executed, apparently, in distemper, but, on a closer inspection, they will be found to be covered with ordinary wall-paper, only printed in wider strips, which are arranged horizontally instead of vertically. Imitation Corinthian columns, with arches of masonry springing from their capitals, are made to inclose each scene. The execution is spirited and effective, and probably better than anything of the same kind to be got at the present time. These date thirty or forty years back.

At first sight, however, it is apparent that a room decorated in this way is totally unsuited to pictures; the various pieces of wall are, in fact, themselves so many pictures. There are, it is true, one or two small spaces filled in with a plain gray panel and border, on which a picture or two might be hung, but the effect, beside the larger distempered scenes, would be lost.

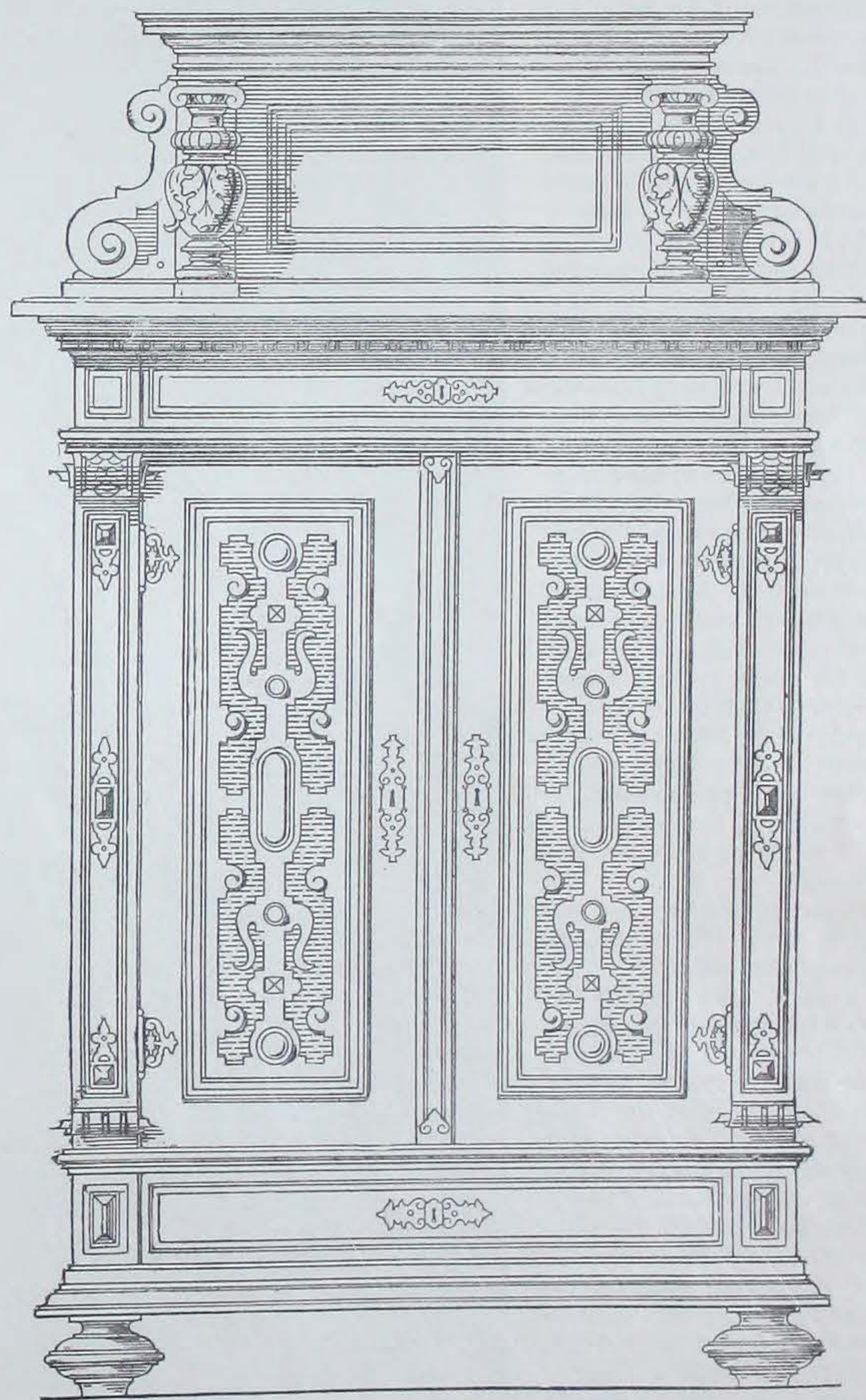
The difficulty with a room of this sort is that the furniture necessarily comes into the scheme of the decoration—taking the place of objects in the foreground of a picture—and requires to be arranged with some reference to the laws of perspective, particularly where a piece of furniture actually cuts into one of the scenes. There are other disadvantages, such as the confused background it presents, and the possibility of the pictured landscape (unless really a work of art) becoming wearisome and monotonous.

It is better, as a general principle, to treat a wall as a wall, preserving its flatness (or vertical plane), at the same time endeavoring to avoid monotony and crudeness, either of design or color. This is the common-sense as well as the artistic view of the interior decoration of ordinary dwelling-rooms.

Once for all, neither in wall-papers nor carpets should the pattern be made to stand forward (in prominent relief), as if it could be clutched by the hand or caught in the foot. To a trained mind and eye this always occasions a disagreeable sensation, and is, in truth, a want of fitness or propriety in design, the first principle of which is to remember the purpose and position of the thing designed for. Gold is of doubtful service in enhancing the effect of a paper, especially if the design be good. It is, moreover, expensive, and the Dutch metal often used in its place is apt to turn black.

To sum up, a drawing-room should be of medium tint, not dark, but such as will light up well; the walls should be adapted for prints and water-colors rather than oil-paintings; the prevailing hue of the walls should be carefully chosen; and, lastly, the room should present a pleasant contrast to the dining-room.

As to furniture, the drawing-room should be suited as nearly as can be to the varied purposes of recreation, social and intellectual, uniformly associated with its name. People



SIMPLE DESIGN FOR A CABINET.

do not want, in the ordinary conversation and desultory employment of this room, to sit up as if they were at a dinner-table, therefore it is useless to have a lot of stiff high chairs.

Three or four of a sort will do no harm. Beyond this it is best to vary the seats as much as possible, taking care they are not too high; also that one or two are sufficiently high in the seat for elderly gentlemen, who object to being dropped into a chair from which they find it impossible to lift themselves without assistance. Convenient ottomans in out-of-the-way angles and recesses are of use, as they relieve the centre of the room. The floor of a drawing-room should never be crowded with furniture, and the old-fashioned centre-table is usually much better replaced by the centre ottoman, if there is room for one.

Many prefer not being able to see all over a drawing-room at a glance, and the prettiest room can generally be made out of a somewhat irregular planning of the walls. Sometimes there happens to be a smaller room communicating, which, besides being a convenient addition, gives opportunity for an effective side view, and relieves the monotony of the four walls, from which there is no escape except by way of the door. It may be snug to have but one outlet to a room, but there is a pleasant sense of freedom in being able to enter at one door and pass out at another; therefore do not be afraid of a house not built quite on the square or four-wall principle, provided the accommodation is in no way interfered with, and valuable space is not sacrificed to picturesque arrangement. As it will happen, however, in the present state of building, that the best one can hope for is to have rooms of

fair size and sensibly proportioned, it will be wiser to leave out of the question a prettily-broken form of room and endeavor to do one's best within the four walls usually provided by builders.

The seats in a drawing-room should commence near the wall line, so as to leave as large an area of the floor as possible for after filling up. Chairs ranged round a wall are not elegant, but ottomans, settees, and divans find their places here naturally, and afford a pleasant view of the room, while the intervening furniture helps the sense of distance, and carries the eye gently away to the opposite wall.

All that tends to soften too hard and prominent outlines; all that lends distance to effects that would otherwise be harshly and painfully near; all that gives variety and an indescribable charm to the mind and sense, should be cultivated in the fitting-up of a drawing-room. A dining-room may be set out with as much precision as the aisles and pews of a church. A drawing-room admits of as much freedom of arrangement as you like, under certain graceful restraints. The two rooms certainly differ as widely as a city square differs from a tastefully laid out garden, with natural winding paths threading their way between trees and shrubs and mounds, an appropriate place for recreation.

The set pieces of furniture in a drawing-room (not the chairs) should be dispersed about the walls, and not crowded at any one part. It will thus be easier to divide attention, and to counteract that centralization of interest which sometimes occurs, and is mostly undesirable. Choose a convenient spot for your piano-forte, as much in the dark as possible, as it is likely to be an eyesore unless you go to the expense of a specially made case. Then consider the best form of cabinet for your room, and, if possible, plant it at the other end, away from the piano. A moderately-sized writing-table may stand in a recess or window. If in a window, leave room to get round it. One or two small tables about the room are very useful for many purposes besides the "five-o'clock-tea." A small cabinet for music will generally fill in somewhere along the wall, and leaves no excuse for music to be scattered about untidily till it is torn or lost.

Avoid rickety tables and flower-stands that are apt to be overturned by the touch of a passing dress. A flower-stand or a fern-case can be made as firmly as necessary, and your friends may be saved the mortification of inadvertently, and through no fault of their own, upsetting a valuable cargo.

If a room seems too long, or you want to break the line somewhere, a folding screen may be introduced with good effect. That of the illustration was designed at the Royal School of Art Needlework at South Kensington. It is an exquisite design of myrtle, rose, jasmine and honeysuckle, worked on satin in silk, natural colors. To make it, for the ground, amber-hued satin for the myrtle and jasmine panels, and pale gray-blue satin for the rose and honeysuckle panels, would be effective. The embroidery should be done in filloes. For the myrtle use deep-gray blue, gradually paler toward the centre, which must be cream-white; foliage dark blue-green; stem and back or under side of foliage a lighter, yellower tone. For the wild roses use very light tones of pink for the upper roses shaded with richer tints, and gradually deepen the color and enrich the shading toward the bottom of the panel; use pale yellow for the stamens and yellow-greens for the foliage. For the jasmine use cream-white for the petals, the high lights to be worked in gray-white; white-green for the stems and the calyxes; blue-greens for the upper and yellow-greens for the lower side of the foliage. For the honeysuckle use rich buff for the flowers, and blend in orange and deep vermillion in the tubular part where the flower enters the calyx; make the stamens cream-white, tipped with light-brown done in a single French knot or antique stitch; use yellow-greens for the upper and white-green for the under side of foliage.

It has been a fashion of late years to fill up the end of a room, or part of one side, sometimes both, with a voluminous arrangement of gilding and plate glass, termed a console glass. Formerly this was supported by a console table with a marble top, but latterly the table has been superseded by a "jardinière" for flowers or ferns, which is also made to do duty as a seat when required, by removing the flowers and substituting a stuffed top or lid. The effect, when filled with flowers, may be pretty, but the plants seem out of place and unnatural, and many persons object to full-length views of themselves at every

turn. A cabinet with a central mirror, enough for all purposes of reflection, would be far better. You cannot put much of yourself, except your image, into a sheet of glass, however large, but you can impress a good deal of your character into and upon a cabinet. To begin with, it should be tolerably high, it being a mistake to keep all the pieces of furniture low, as it is impossible to make a picturesque room without some variety of height and diversity of shadow. It requires no stretch of imagination, if you once lay aside preconceived ideas of a certain stereotyped form, to comprehend that a cabinet may be so constructed as to display any ornaments placed upon it to the very best advantage, and this in itself, perhaps, would lead to a more conscientious selection of ornamental gew-gaws than generally prevails, since, in the heterogeneous confusion of Bohemian glass and cheap lacquer, aided by the meretricious reflection of plate glass, it seems to matter little, so long as there is plenty of glitter, by what means it is produced.

Small ornaments should not be displayed near the ground, but on shelves or in cases more on a level with the eye, the larger and more massive pieces being reserved for the lower shelves. Part of the cabinet may be inclosed by a solid panelled door or doors; it is useful, and gives a balance to the whole, or if you want cupboard-room, the lower part may be entirely closed. This is a question of convenience. A curtain of velvet or embroidered cloth is sometimes introduced. It is decorative, and it may be considered untidy. This is a question of taste.

The more you can break up a cabinet into an orderly arrangement of parts, scientifically proportioned, the greater will be the pleasure derived from its after contemplation, the task of taking in the whole at a glance will be rendered difficult, if not impossible, and if the recondite nature of the lines is equaled by corresponding subtlety of color, and crowned by a truly artistic arrangement of the contents, you will have a near approach to a perfect drawing-room cabinet.

Every one will not have old or even modern china or Venetian glass with which to decorate a room, but a cabinet may contain books, portfolios, music, trinkets, and portable drawing-room property of various sorts, and yet be an artistic piece of furniture, and much more useful than its more pretentious neighbor. As a rule, silvered glass should occupy some portion of the back; if in small pieces, the edges should be bevelled; in large sizes this is not so imperative.

In a drawing-room cabinet, the outline should be straight lines rather than curves—though an arc of arbitrary curve may sometimes be a relief. There should, however, be some flow of lines, at once graceful and appropriate, within the bounding lines, and the artist may be allowed a wide margin with regard to the internal details. Nevertheless it must be borne in mind that, in designing furniture of this sort, well-studied proportion is far more than mere linear dexterity.

It might be assumed that such inevitable concomitants of drawing-room furniture as the tables could safely be left with the facile producers of these useful articles; but



LOUIS XVI. EBONY CABINET.

though the markets are overstocked with fancy tables of various sorts and sizes, many of them must be rejected on the ground of general debility. A table is nothing if not firm, and yet this primary condition is seldom fulfilled. The basis of simple construction is seen in the kitchen table, and with considerable modifications the same formation is applicable to a much higher class of tables. Instead, however, of studying "eternal fitness," the endeavor is made to balance the table on the slenderest possible columns, reduced to a minimum of strength by excessive carving or turning away of the wood where it ought to be left of a fair thickness. From these columns spring elegant carved branches or claws, and for fear so vulgar a thing as a castor should be visible, a hole is sometimes scooped almost through the wood, and a castor (much too small) is inserted. The consequence is, one of the castors soon gives way under the weight of the table, which thus acquires that chronic limp so often observable.

The stand of a table may be made in various ways. The chief point is to get the top supported all round and firmly, so that no ordinary pressure will overturn it. The legs, or stand, should never project beyond the extreme line of the top, and in a writing-table should not be in the way of one's knees.

The legs of a square or oblong table need not necessarily be placed at the extreme corners. If framed a little way in, they will often look better. It is also well to brace

them together by some sort of cross-rails near the ground, though this mode of strengthening causes difficulty in packing. It is obvious that whereas a couple of four-legged tables will pack one within the other, the cross-rails render this economy of space impossible, and to the cheap furniture dealer this may be a consideration, independently of the extra expense of the rails themselves. However, the wisdom of allowing such a parsimonious spirit of utility to gain a morbid ascendancy may well be doubted.

Practically, there is a very large proportion of ornamental drawing-room tables at which you dare not sit down to write a letter, or on which you hesitate to place a lamp. In fact, one habitually approaches a certain class of tables with great caution, for fear an accidental touch should communicate a disagreeable tremor throughout the ornaments and knick-knacks placed thereon.

It is beyond the present purpose to attempt to elucidate the practical putting together of tables and chairs, and even were it done, the amateur might find it well-nigh impossible to unravel the mode of construction in the next thing of the kind he came across. If, for instance, you insist upon the cross-rails of a chair or table being mortised right through the upright and pinned on the other side, it would seem as though you had a guarantee of sound workmanship; yet this method of Jacobean framing may be cleverly imitated by a piece glued on to represent the end of the rail coming through, while the hypocritical rail itself is secured by a peg or a nail. It takes a good while to become a tolerable judge of furniture, so that the safest plan is to go to some house of established reputation.

A chimney-glass is, perhaps, the most sensible thing to put over the mantel-piece. It is not easily affected by the dust and smoke from the fire, and being fixed at a good height from the floor, is not open to the objection raised against the console glass. Here, however, there is room for the exercise of ingenuity, in a departure from the mere sheet of plate glass and the substitution of something more varied and effective. The fireplace, with its projecting breastwork, is a fine basis for the erection of an imposing superstructure. Sometimes the mantel-piece and glass are made as one united whole, the entire structural parts being of wood. Where the mantel-piece exists, it may be cased in with wood, if preferred, and above it you may construct an "over-mantel" of varied parts, light or heavy, with or without shelves, and with the top slightly overhanging, in the form of a cove or arch. Gilding, painting, or simply well-chosen colored fragments of paper, leather, or stuff, will do duty in panelling out the various parts, while a good-sized mirror should occupy the centre. It is to be hoped that the subject of marble mantel-pieces will receive more attention at the hands of builders, as they are mostly very difficult things to bring into the general scheme of a room.

The important questions of carpeting and curtaining must not be overlooked. A favorite plan, where parquetry is too expensive, is to cover the floor all over with India matting, or plain colored felting, and afterward spread foreign rugs and mats about here and there. This lacks unity, though there is a refreshing coolness about the look of the matting, especially in hot weather. There can, however, be no possible objection to bordering the room with white or colored matting, and laying down a centre carpet. It has a bright and clean appearance, and musical sounds strike clearer and sharper than in a room carpeted all over.

Gaudy, bright-hued carpets are a complete mistake, as are also large, geometric, or spotty patterns. Remember, always, a carpet is a background to all the colors that will be seen against it, and take care that it is subdued in tone, and that the colors are well blended,

as by this means they will counteract any too positive predominant hue. A room is incomplete without curtains; there is always an unfinished look until the hard outline of the windows is broken by the soft folds of drapery, which catch the full force of the light from outside, and disperse it in modified form over the room.

Besides their use in subduing the glare of light, there is, of course, their practical aspect in keeping out draughts, and closing in the room at night, which important functions should have been placed first. Curtains depend for artistic effect mainly on three things—color, texture, and aptitude for falling into soft and graceful folds. Hence, silks, cloths,

velvets, and serges are all suitable materials. The highly glazed chintzes of former days, though admirable in many respects, were ludicrously stiff and angular, and one gladly welcomes, in their place, the soft cretonne cloth, with its wonderful variety of pattern and color. Mixed colors and chequered patterns are less necessary in the curtains than in the walls and carpets; and frequently, after an exhaustive search for a well-designed patterned curtain that will suit a room, one is obliged to fall back on some self-colored stuff, and confess that it answers every purpose. There is, however, no binding rule here, nor need you be in the least averse to a figured material so long as it is not spotty, but what is known as an "all-over," or well-covered pattern, and not too violent in contrasted colors.

The Spanish cross-striped materials in brilliant reds and yellows are rather the exception than the normal standard for curtains. There is, in the present day, an overwhelming supply of curtain stuffs of every color and texture, many of which do equal credit to the ceaseless activity of brain and loom, so that one need scarcely point to any in particular; and general principles affecting design in wall-papers and carpets will sufficiently indicate the line to observe in approving or rejecting any pattern. Many people confine themselves to muslin or lace curtains for the drawing-

room, but, although this is a fairly passable escape from a difficulty, it cannot be considered more than a temporary measure. Lace curtains behind the heavier stuff curtains give a certain dress and finish to a room, but by themselves they are too weak and transparent.

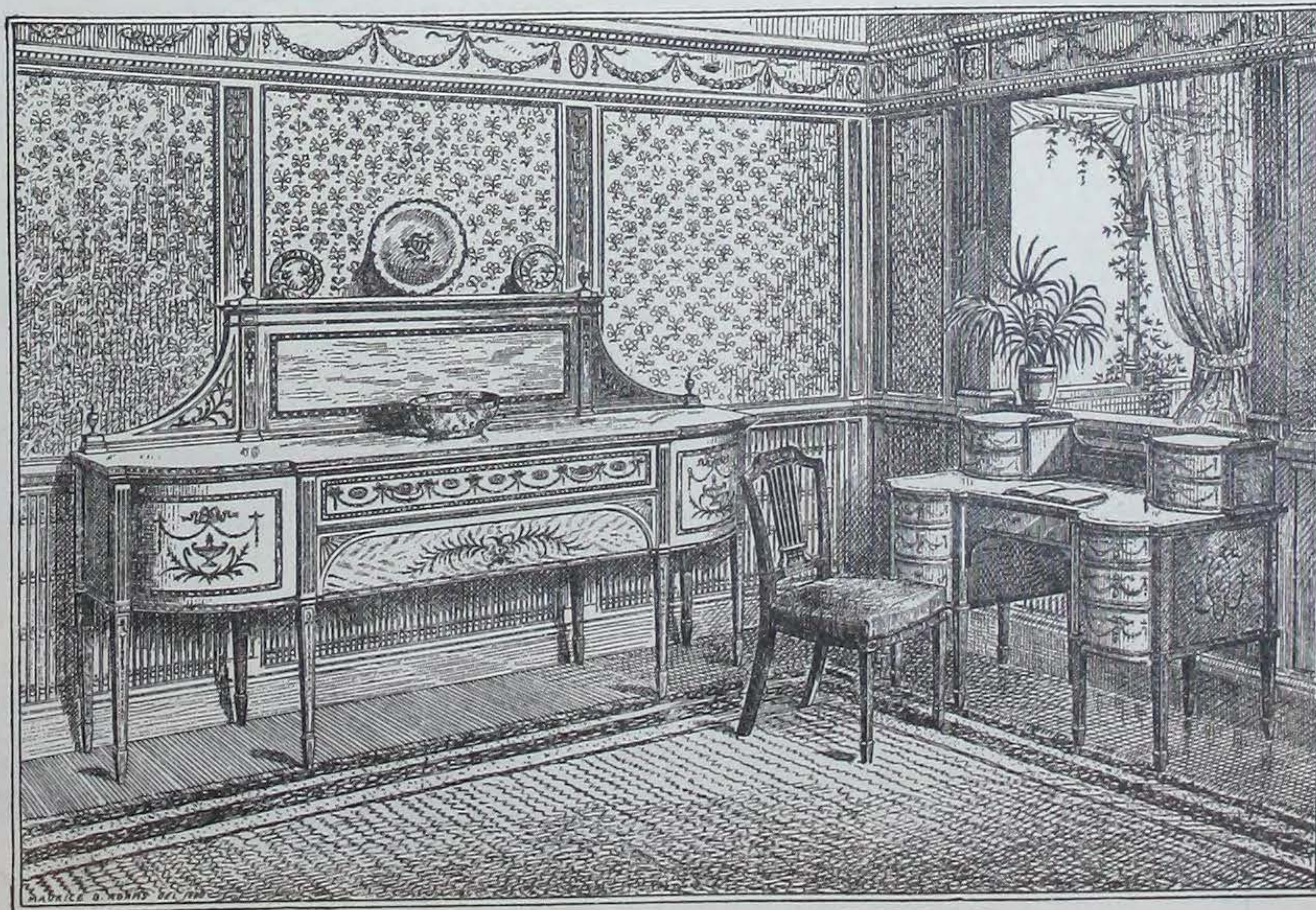
As to valances, the grandiose bullion fringes with wooden pendants, encased in twisted yellow silk, are generally abominable, yet even these, worked in quiet colors harmonizing with the curtains, and kept to some very simple outline, may look exceedingly well, and by no means barbaric. The simpler and more natural a valance is the better. A light brass pole will always answer the purpose as an ornamental curtain-rod. Cornices require valances, and frequently bring the window into excessive prominence, and detach it from the wall in a manner injurious to the general effect.

A word on window-blinds will not be out of place here. The expedients for screening windows seem to be various, and the window-blind of the day is rapidly superseded by the window-blind of to-morrow. And yet the question may be resolved within very narrow limits. The purpose of a blind is to screen the room from outsiders, and to modify and subdue the light. And these points seem best met by the usual white linen blind, or the Venetian blind formed of parallel

laths of wood, which turn on their axes, and admit air and light as required. It is strange that the tints of the Venetian blind have been so few, when by painting the laths a certain tone, a refraction of rays might be obtained, of great benefit to the room in which they fall; instead of which a powerful green is the usual color adopted, which often completely nullifies the tone of the walls and curtains, and shuts out the light no more effectually than a paler tint would do, seeing that the laths themselves are opaque. However, in the absence



DESIGN FOR A FOUR-FOLD SCREEN.



MODERN ENGLISH WRITING DESK, CHAIR AND SIDBOARD.

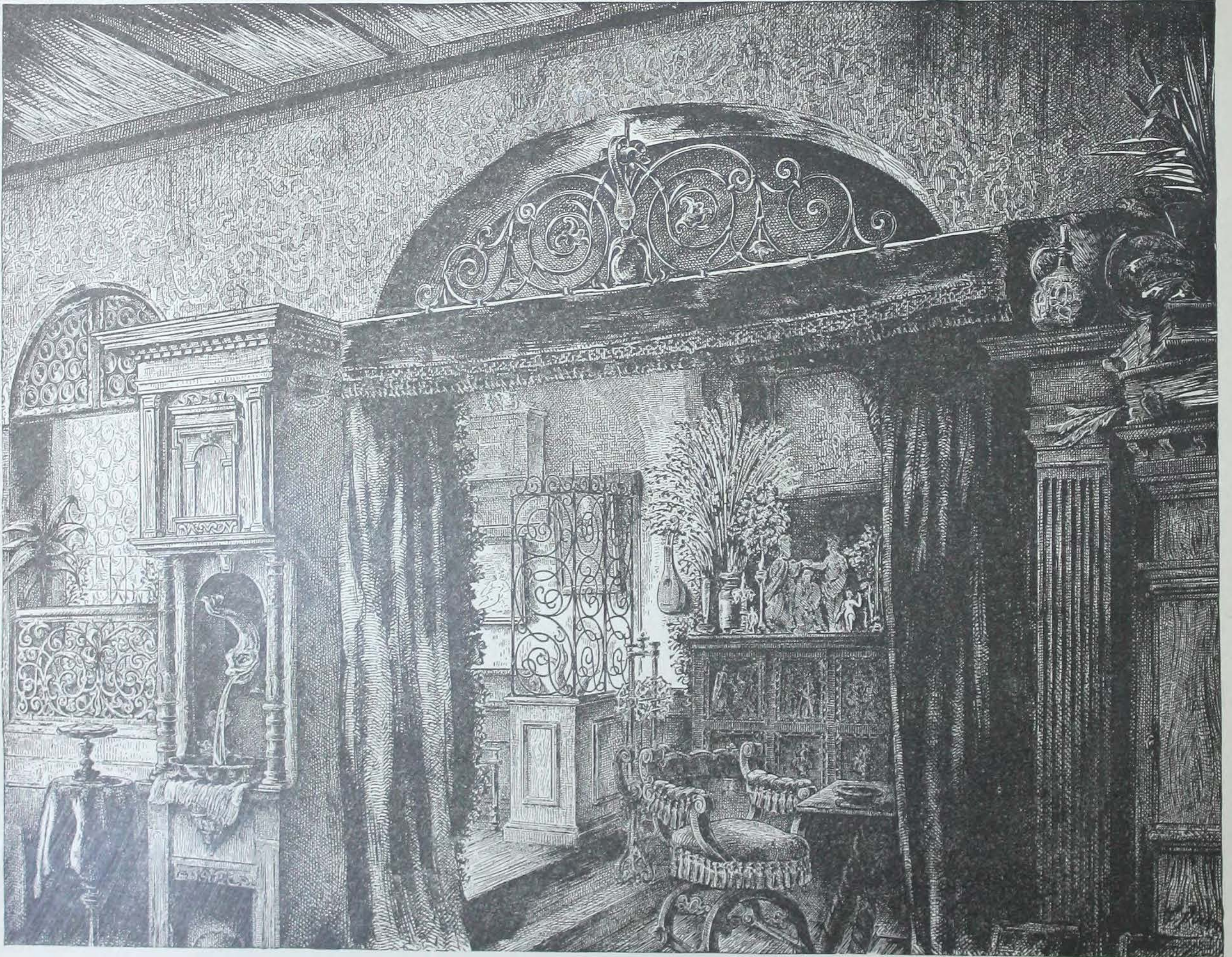
of Venetian, the white linen blind is the simplest means of softening the light. All colored blinds, as usually made, are too strong, and overlie everything with their own reflection.

Where low half-blinds are required to windows overlooked from the road, the English wicker-work, plain or gilded, is as inoffensive as anything. All wire or gauze blinds are dismally ugly, and ground glass is office-like and monotonous. A fashion obtains abroad of employing stained glass, set in small cross-bar frames of lead, gilded. The pattern is often a simple rosette and flower alternated, and the effect is good both inside the room and from the street.

And now let the reader take a rapid survey of the drawing-room here theoretically furnished. The door is flung open, and he crosses the cool Chinese matting, and steps upon the velvety pile or Persian carpet. Progress is easily made across the room, or by a circuitous path, skirting divans, easy chairs, and small tables. He sits comfortably on one of the aforesaid lounges, and glances round. The walls, mirrors, seats and pictures seem to form one continuous, harmonious, though varied, panorama of pleasing forms and colors, ming-

centre, perpendicular waved lines with the aforesaid sprigs or dots, sprigs and dots without either diagonal or wavy lines, or even dots alone—in fact, all manner of meaningless and wearisome repetitions of lines and spots, which afford no other relaxation for the throbbing head or weary brain than that of endless arithmetical problems—often to the utter distraction of the poor invalid. A bedroom wall-paper had far better be in some rambling pattern, where it is impossible to discern beginning or ending. If the eye be induced to attempt to track the lines to their conclusion, the effort will most likely act as a soporific.

Touching the question of color, a bedroom should not have very dark walls or hot looking walls. Coolness seems a necessity next to cleanliness. Aerial half tints are very suitable, with scarcely any pattern, or if any, one only faintly described by a lighter or darker tone of the ground. There is a deceptiveness—a seeming transparency—in such a paper, similar to the atmospheric effects of sky and cloud, which intercept but never seem abruptly to stop the vision. Papers of this description, part dead or dull and part glazed (satin, as it is termed), in pale rose, pale blue, pale green, or pale amber, are sure to make a good room, and will wear a long time. To procure these is no difficult matter in a place of any size.



VIEW IN THE HOME OF THE ARTIST F. A. KAULBACH IN MUNICH.

ling and contrasting. The pieces of furniture are not instantly received on the retina of the eye as so many inky blotches on a white wall; but slowly, and as the eyes become accustomed to the room, one by one the different points come out, and by degrees their various forms and component parts are unfolded. Bits of color, unobserved at first, starlike appear. The curtains also fall into the scheme of the decoration, and merge their individuality for the good of the room, which is the more enjoyed the more occupied.

CHAPTER V.

THE BEDROOMS.

Judging from the exhaustless supply of wall-paper patterns through which one is invited to wade whenever a bedroom is to be papered, it might be thought that here at least every variety of taste and condition must be met. Unfortunately the great majority of the patterns may be rapidly divided into diamond shapes with dots or sprigs in the

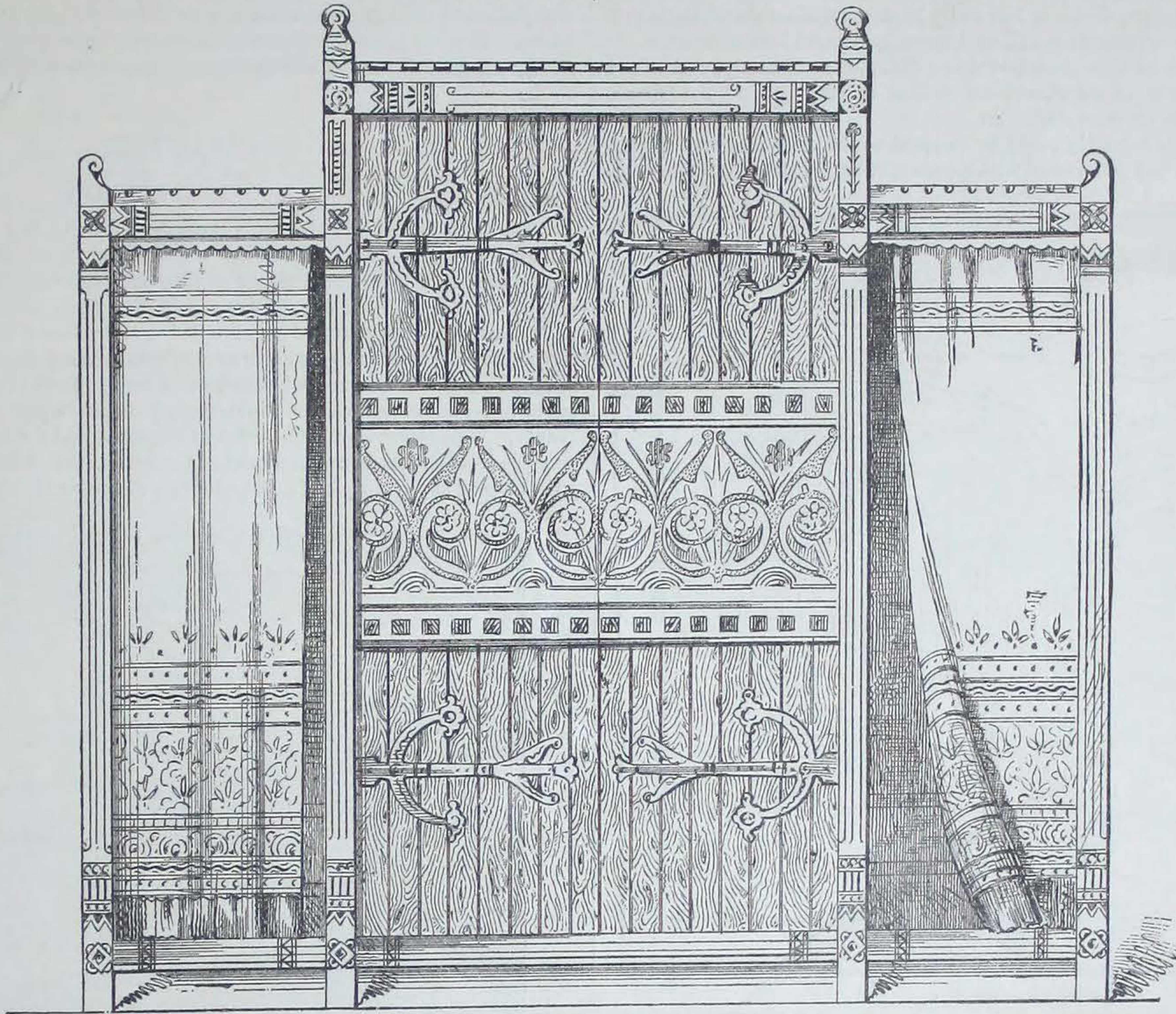
Borders at top and bottom may be used or not; great care is required in selecting a bordering, or it will do more harm than good. The colors may either harmonize or contrast, but should in no case be too strong. If the room is low, a border will be disadvantageous, by bringing it still lower. The ceiling and cornice are improved by a tint of the same color as the wall-paper, but of course lighter. The doors and woodwork should also be painted in tones of corresponding color.

A young girl's bedroom may reasonably call for light treatment, but with all deference for the cherished "white muslin over pink," and all that sort of thing, one cannot help thinking a room of this description might be gracefully and appropriately decorated without having recourse to a species of millinery and "flummery," which in their proper sphere of dress may be elevated into an art, but in the furnishing of a room are out of place and unmeaning. Adopt a lighter style by all means, let the special tastes of the occupant of the room be consulted, but let the room itself be a means of education in the laws and principles that underlie sound taste.

The furniture of a bedroom presents no great difficulties in the way of selection, the different pieces being dictated by the requirements of rest and of the toilet. Modern bed-

room furniture, however, especially the common sorts, still comprises some of the worst examples of constructive design. The dressing-table and wash-stand are often a mass of coarse and extravagant curves, the legs resembling the fore legs of a bull-dog, but having

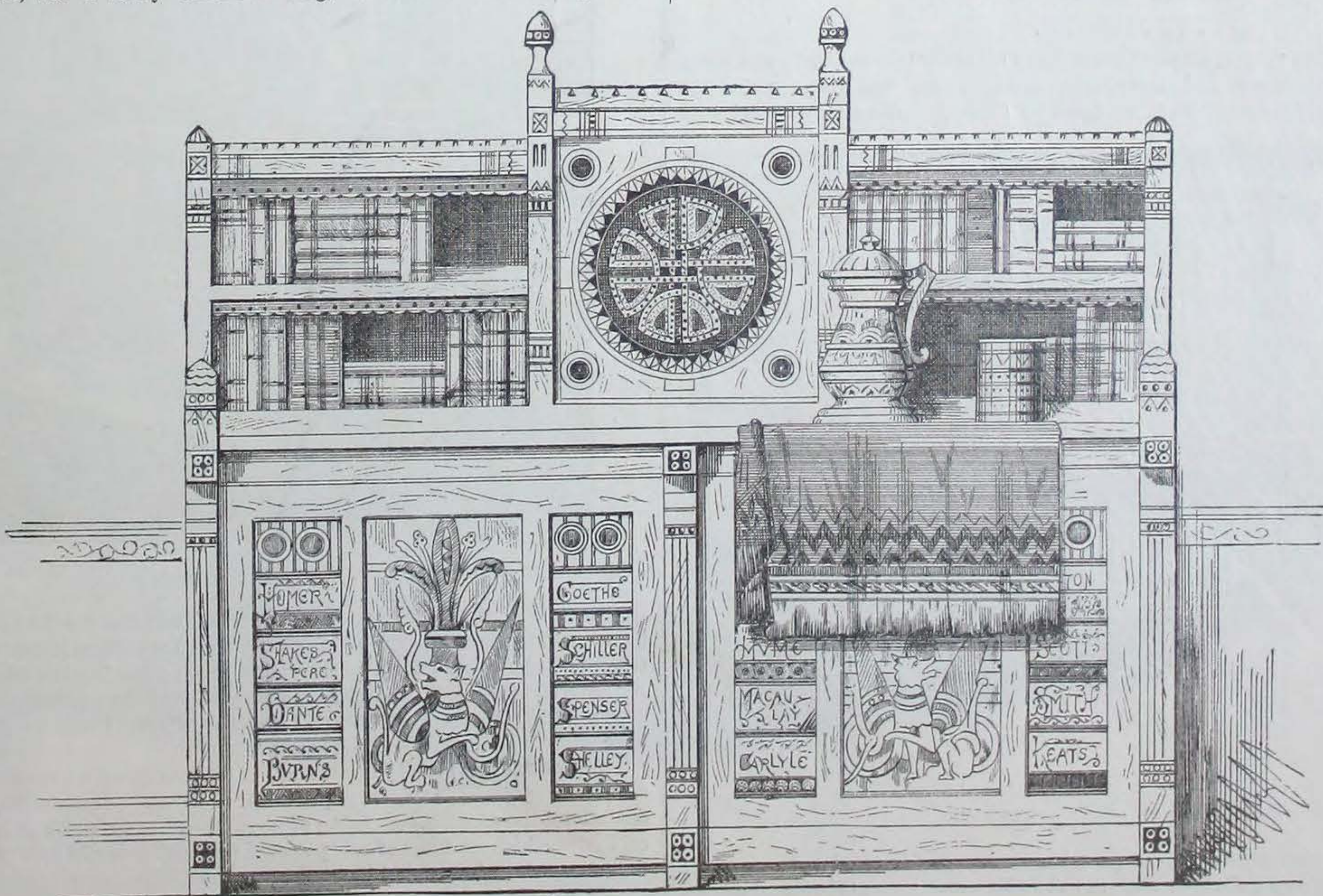
For ordinary purposes, a sensible form of turned work is sufficient for the legs of the wash-stand, dressing-table and chair, and preference should be given to straight lines in the furniture itself. Choose solid woods in preference to veneer, as, in veneered furniture,



DESIGN FOR A WARDROBE WITH CURTAINS.

none of their sturdiness. An oval mirror, supported by clumsily carved brackets, completes the "elegant toilet table." The old Queen Anne style of table, of which this is perhaps a gross caricature, was a vastly different thing, the curved lines having some

one never knows how much common wood is underneath. Walnut, ash, oak, mahogany, or pine may be used. Bear in mind the general color of a wood has more to do with the effect of your room than any fanciful grain or figure which it may happen to possess.



DESIGN FOR A BOOKCASE.

beauty and restraint, and the legs never being scrolled so recklessly as to threaten the tenacity of the grain. If the curved style is to be carried out at all, it must be well and carefully done, or it is better left alone. To trifle with is to spoil it, as in many matters.

Wooden knobs to doors and drawers are inelegant appendages, and most likely owe their origin to the small cost at which they can be produced. Brass or bronzed handles are less in the way, and are ornamental. There is no necessity, however, for an ostentatious

tious display of brass. Simplicity in the furniture of a bedroom is desirable, rather than richness or profuse ornamentation.

The bedstead, formerly of wood, is now often of brass or iron. The wooden bedstead more completely furnishes the room, but it is less easily kept clean than the metallic bedstead. In iron and brass the best patterns are those formed by parallel bars and circles.

The bedstead is seldom now so closely curtained and canopied as formerly, and wisely so, since, except at the head, curtains are worse than useless, as they prevent the free access of air. Many people abjure curtains altogether.

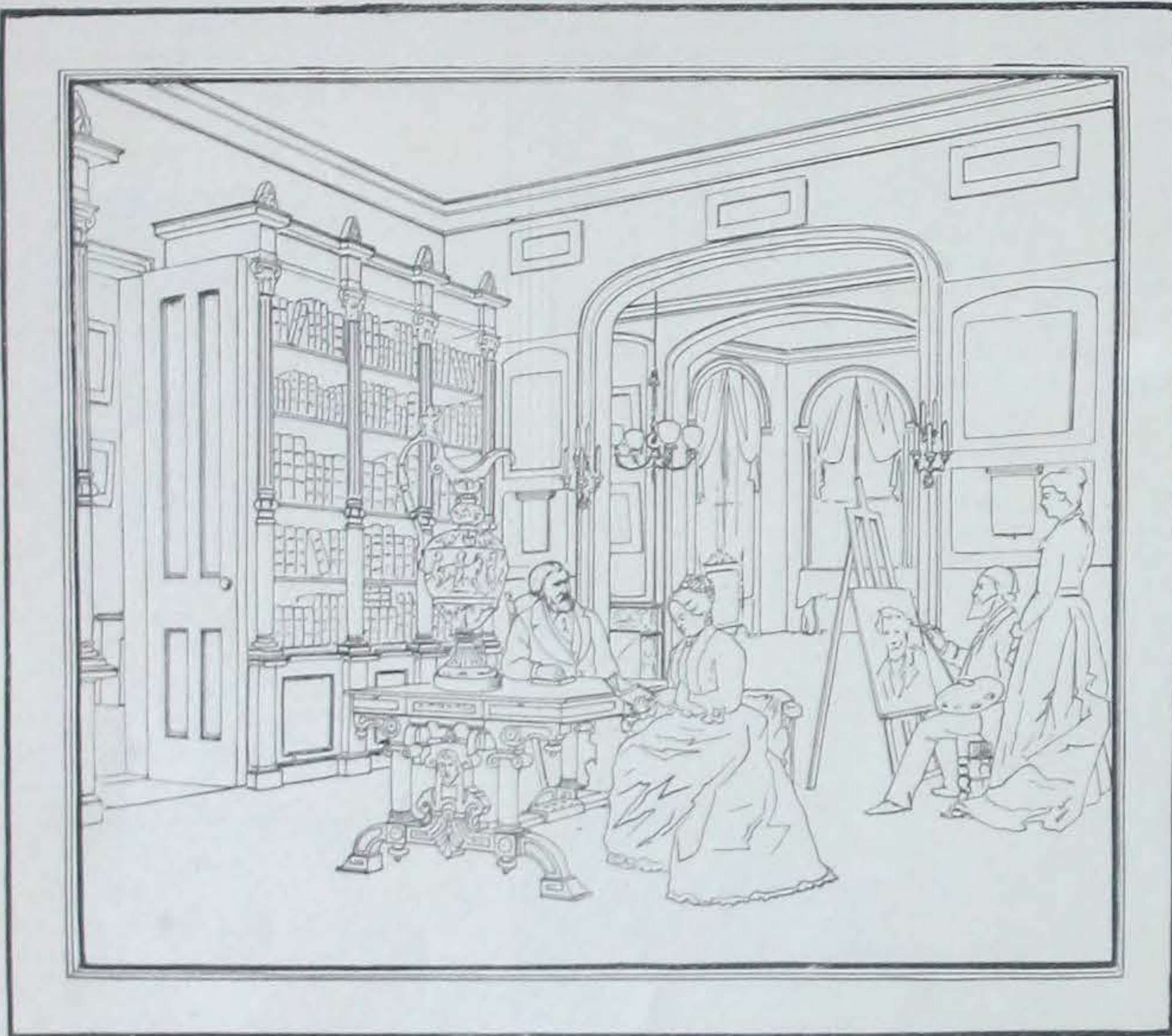
The floor of this room should certainly never be carpeted to the walls; a broad margin should be left all round, which may be covered with matting, or any of the soft, warm floor-

doors are indispensable, if the books are worth preserving. If the book-shelves are not too high, the upper shelf, with a raised back, will be useful for ornaments. For economy, pine, stained black or painted any shade, might be used in this room, and indeed a certain rude, effective style is permissible in a nondescript room, which would be out of place elsewhere. Of the designs for placing books pictorially presented that one titled "Simple Design for a Bookcase," could, perhaps, be carried out by a village carpenter of ordinary ability.

CHAPTER VII.

THE KITCHEN.

The furniture of the kitchen is exclusively useful, but well-ordered, light, and cheerful examples of this part of the house are by no means undesirable places to see. Nor should they be, for cooking utensils and the various other things necessary in the preparation of food and drink for the household, are, many of them, of the shape, possess the polish and pleasing variety of metallic lustre, and admit of the manner of grouping in their respective places, which give decorative effects that are highly pleasing. We have visited kitchens which are not only wholesome and sweet places at all times, as surely all kitchens ought to be, but of which also the memory preserves a picture of neatness, order, and even beauty. True refinement is no respecter of places, and for that matter, is there any reason why the kitchen should not be a part of the house, to say the least, as little likely to offend good taste as any other part? Its utilitarian character should not be any barrier to making



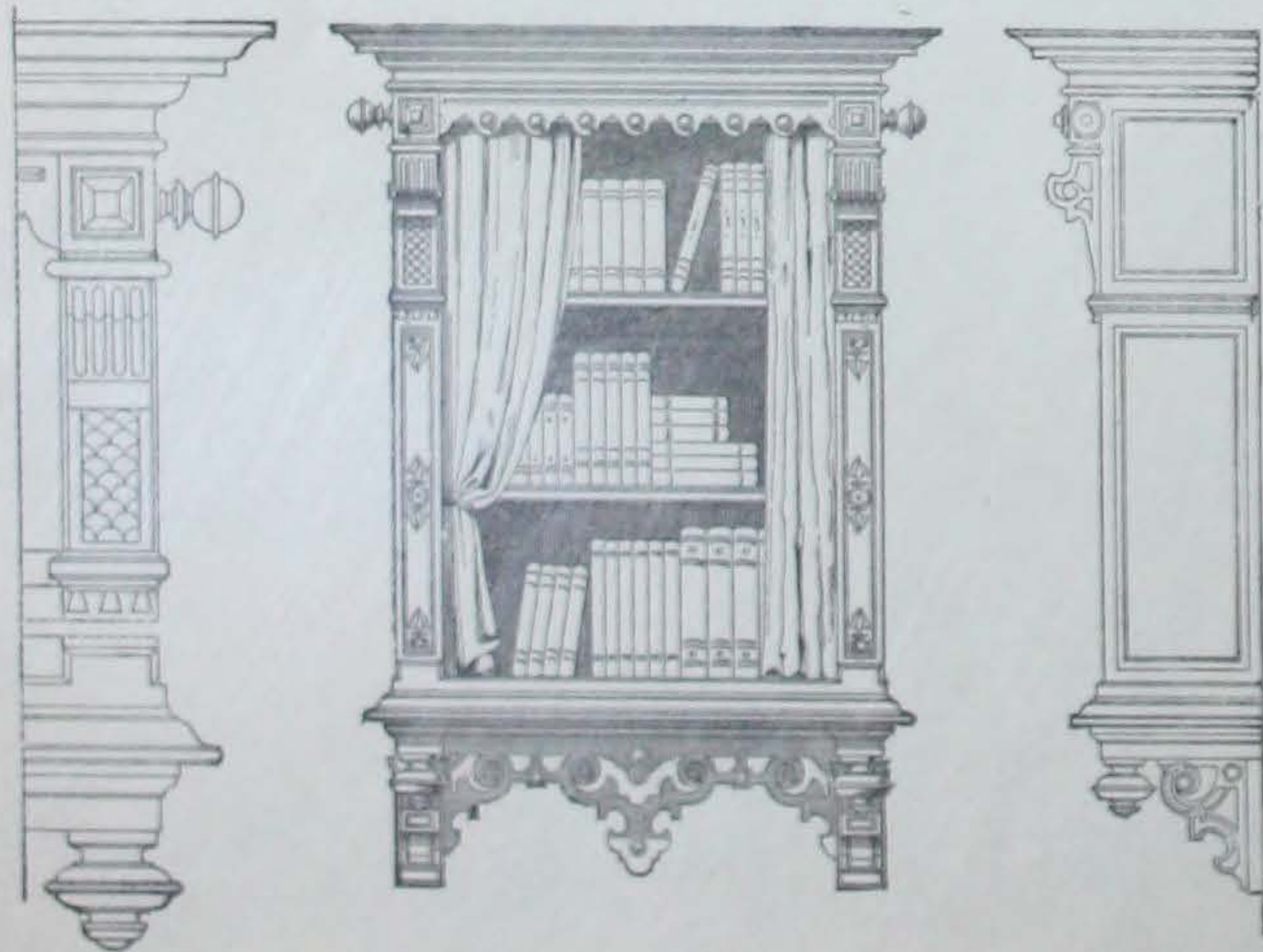
A TASTEFUL LIBRARY.

coverings made of cork and India-rubber. A centre carpet of Brussels, Kidderminster, or felt can then be thrown down.

CHAPTER VI.

THE LIBRARY.

If this room is a library proper, its arrangement will naturally take the form of a series of convenient book-shelves, closely and methodically filled. These will range round the walls, while the middle of the room will be occupied by a heavy writing-table, fitted with



SIMPLE DESIGN FOR A BOOKCASE.

drawers and cupboards for the reception of papers and manuscripts. Nine times out of ten, however, the library—so called—is also the smoking-room, morning-room, school-room, or ante-room, and when this is the case, it is a mere farce to treat it with the austere solemnity of a genuine library. It may then partake of a mixed character, and become a pleasant and useful family room.

Book shelves are better neither too high nor too low. If too near the ground the books get covered with dust, and if too high they can only be reached by a chair or steps. Glass



A STUDY MANTELPIECE.

the most of what it does possess in the way of material for the exemplification of correct principles in household art; and readers who agree with us in this view will be pleased with the opportunity given them of considering with attention the ideal kitchen illustrated in the large picture found on page 14. Fancy will aid these persons in the conception of what such a kitchen would be in fact, the realities of varied colors and high polish—impossible to show in the engraving—being present.

The cabinet on page 13 is an article of kitchen furniture remarkable for its ingenuity in economizing space. It contains places for nearly all the articles required for use in culinary operations, the utensils, etc., being arranged so as to be ready at hand. The making of a cabinet in which the hints of this patented production would be utilized without violation of the inventor's rights, would be a useful exercise of ingenuity.

In the cabinet illustrated, A represents the top or table; B is a hinged leaf at the rear side, supported on suitable slide pieces; an ironing board can be placed in front of the corner slides, C, which are also made use of for sharpening knives. The central front part of the cabinet is arranged for shelves, D, forming a dish cupboard with hinged doors. At both sides of the shelves, D, are drawers, E, for miscellaneous articles—flour, sugar, meal, towels, etc.; and above the shelves, D, and drawers, E, are two drawers, G, of smaller

eight, but with inside partitions, one drawer being for forks, knives, and spoons, the other for spices, etc. Below the top, and between the slides, C', are arranged various sliding devices, as a bread-board, a vegetable-cutter, a knife-scourer, a grater, and others, which are drawn out as required, being pushed in after use. The space at the rear part of the cabinet is divided by a central partition into longitudinal chambers, F, for storing various larger articles of kitchen use, as tinware, potato-mashers, etc., while longitudinal drawers occupy the remaining available space.

CHAPTER VIII.

HINTS TO PURCHASERS OF FURNITURE.

In nothing is a purchaser so easily deceived as in cabinet work. Cabinet-making is essentially an art, and demands a clear understanding of the nature of the material which is to be worked and the various modes of construction, so as to obtain the greatest amount of strength with the least waste either of labor or material. The carpenter is always an honorable person. Why should not the cabinet-maker be equally so? For the simple reason that the carpenter is forced, in much of his work (floors, joists, roofs, and other responsible timbers), to remember that lives may depend upon the thoroughness of his work; whereas the cabinet-maker's craft, though requiring greater precision and accuracy of finish, seldom has to resist any great strain, and the consequence is that much of the furniture sent out is considered durable enough if it has just sufficient tenacity to hold together with careful usage. And the public encourages this state of things by asking over and over again for the cheaper article, without attempting to form any sound judgment in the matter. The fact is, if a piece of cabinet furniture is well made it will probably last a hundred years or more, and still be in a fair condition; but if badly made in the first instance, it will be a source of annoyance and expense from the day it is purchased to the no-distant period when it may be sold for one-fourth its original cost, or banished into the attic or lumber room. It is notorious that we get so accustomed to continual breakages in our furniture (weak joints becoming fractured and bits of carving dropping off), as to regard them as inevitable. This need not be if people would pay more regard to soundness of construction and less to meretricious ornament.

It is not the easiest thing to tell at a glance whether a chair, or a cabinet, or a sideboard is likely to last a lifetime, or whether it will "spring a leak" the day after we get it home; and for this reason a few broad hints for the guidance of untechnical purchasers may be serviceable.

Many people seem to think the nature of wood will allow of its being turned and twisted about at pleasure; but a moment's reflection will convince the reader of the absurdity and impossibility of this. The trunk of a tree may be described as a cluster of fibres running in the direction of its length, and through which the sap flows. These fibres constitute what is termed the "grain" of a wood, and are more or less compact in different kinds of timber, thus giving rise to the terms "close-grained" and "open-grained." The closer the grain the harder the wood. A shortness of grain also renders a wood more liable to snap when used as legs or columns.

We have said that the grain runs with the length of the trunk. If we want to cut a stick out of the trunk of a large tree (which, by the way, we never do, as the offshoots form better ready-made sticks and more elastic, we cut in the direction of its length, and the

fibre or grain running its natural way gives to the stick the greatest possible strength. But let us suppose the tree to be of large enough circumference to allow of the same sized stick being cut across the trunk, at right angles to its upward growth. After infinite trouble we hack out a piece similar in size to the first. Now with your hands try the strength of the two. The first, with the grain running lengthways, will not yield; the second, cut right across the trunk, snaps with more or less ease. It was cut across the grain, and is composed merely of a succession of short fibres, which have a minimum of cohesive power.

Every one knows the ease with which, say, the side of a wooden box or packing-case can be split in the direction of the grain, and how next to impossible it is to chop it the reverse way. Therefore, the first principle in the use of timber, if we would obtain the greatest amount of strength, is to let the grain run in the natural direction with the length of our work, and not with its breadth or narrowest way.

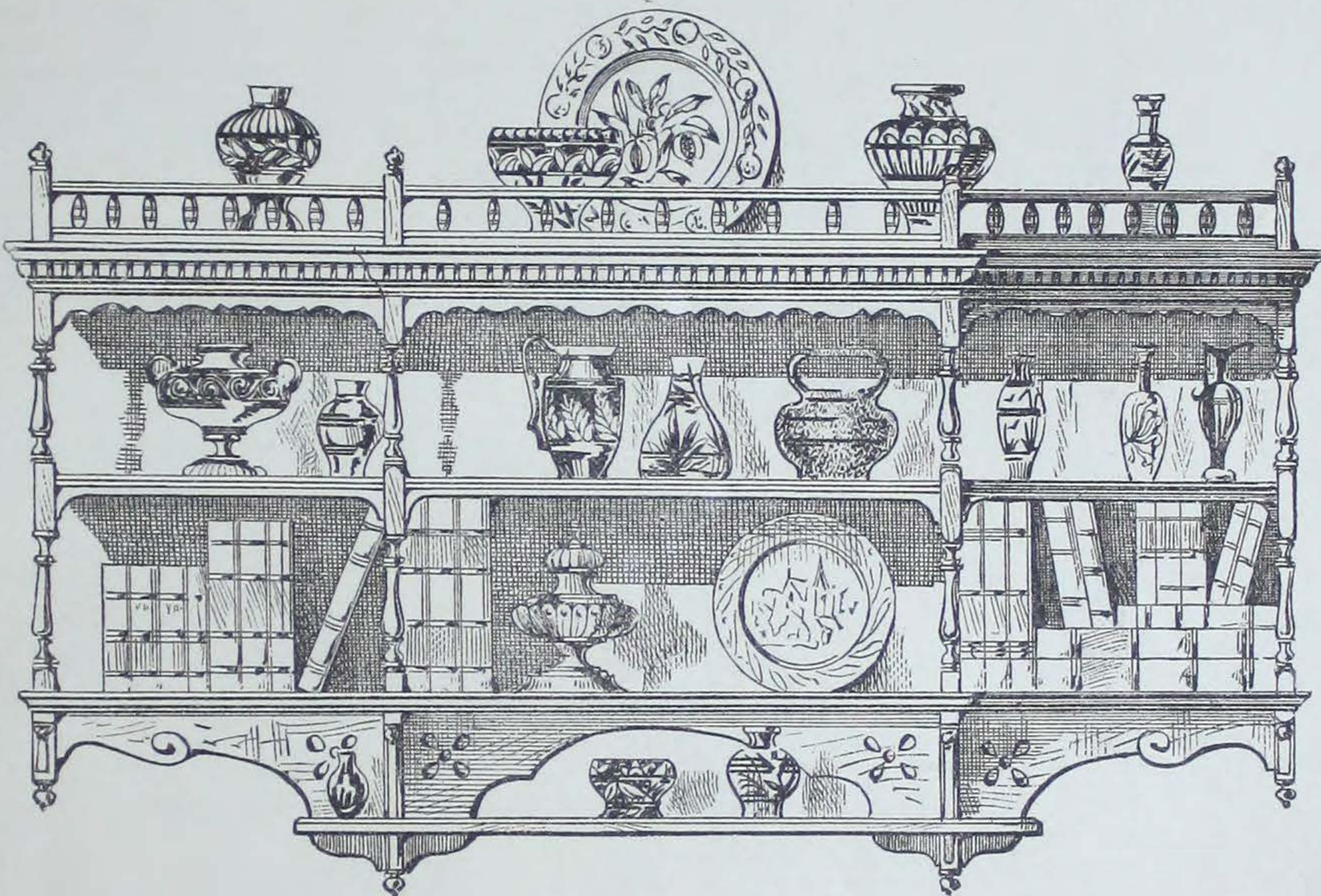
Let us proceed a little further and see where the principle is abused. Suppose we cut a plank or board an inch or two thick out of the middle of the aforesaid tree, from top to

bottom of the trunk, in the direction of or with the grain. This board, let us say, measures one foot six inches wide, and any length you please. We want to cut a chair-back out of this plank, say one of the modern circular chair-backs peculiar to this century. Try it on a piece of paper or cardboard, ruled across with parallel lines to represent the grain of the wood. You will find when you have drawn the outlines of the chair-back that in parts the grain will only be an inch or two long, and at such a point the chair would soon snap. Therefore the chair-maker finds it imperative to form the back out of three or four different pieces, in order to get any length of grain; but even then the grain at parts is very short, and this perhaps just at the point where he requires to peg or "dowel" his joint. The same danger also threatens the curved leg, particularly when the curve is unusually great.

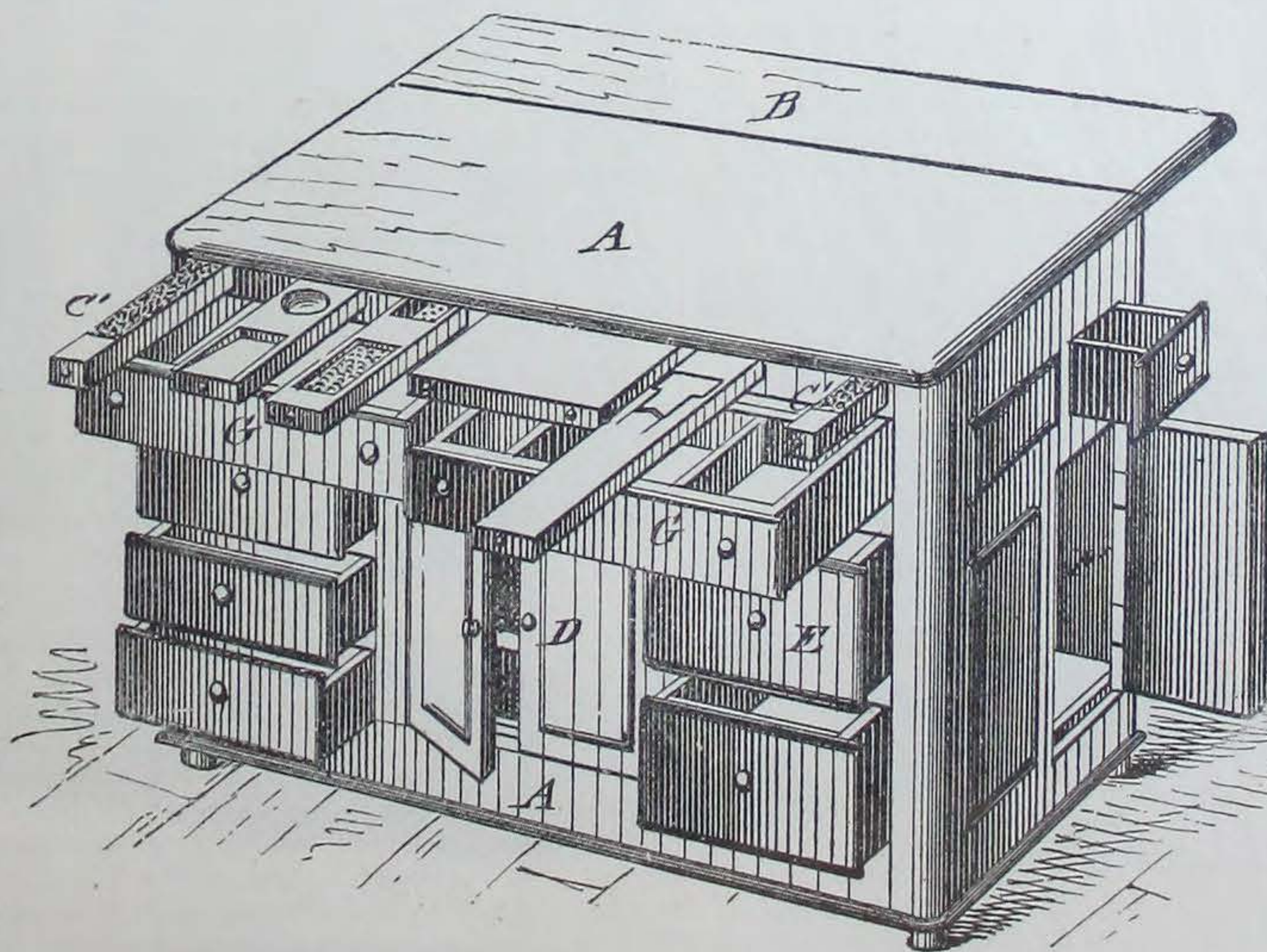
The strongest form that can be given to the back of a chair is where the two upright pieces are straight, or nearly so, and the cross pieces also straight, and mortised into the side uprights. The legs of a chair are fixed in two ways. Either they are pegged up into the seat framing, as in light caned or bedroom chairs, or else the ends of the seat rails are mortised into the upper parts or square shoulder of the leg, which is by far the strongest way of framing, and should be employed for dining-room chairs, and whenever the seat of the chair is stuffed. Where the legs are only "pegged," it is necessary to strengthen them by rails from one to the other, but with a chair properly framed these are not essential, though, of course, they add to its strength, and, artistically, they give balance to the chair and prevent it looking top-heavy. Besides, it enables us to dispense with a clumsier leg than necessary.

The question whether a house should be furnished throughout in one style, or whether each room may represent a different period, is easily disposed of. A house should be furnished throughout harmoniously, and not be a series of violent contrasts in style. A house is the home of an individual possessing character, mind, will, and, it is to be hoped, certain definite principles; and therefore, except in the case of persons of Quixotic temperament and kaleidoscopic mental vision, should not be a succession

of "Jack-in-the-box" surprises. Let it be borne in mind, moreover, that it is impossible for people to adopt every novel freak in the matter of room ornament, and the best plan is that they should choose the ideas which are the most suitable to their taste, and the most easily adapted to their materials and circumstances. Nor should it be forgotten that straitened means need not be permitted to prevent the artistic embellishment of home.



SIMPLE DESIGN FOR HANGING BOOK-SHELVES.



A KITCHEN CABINET.

CHAPTER IX.

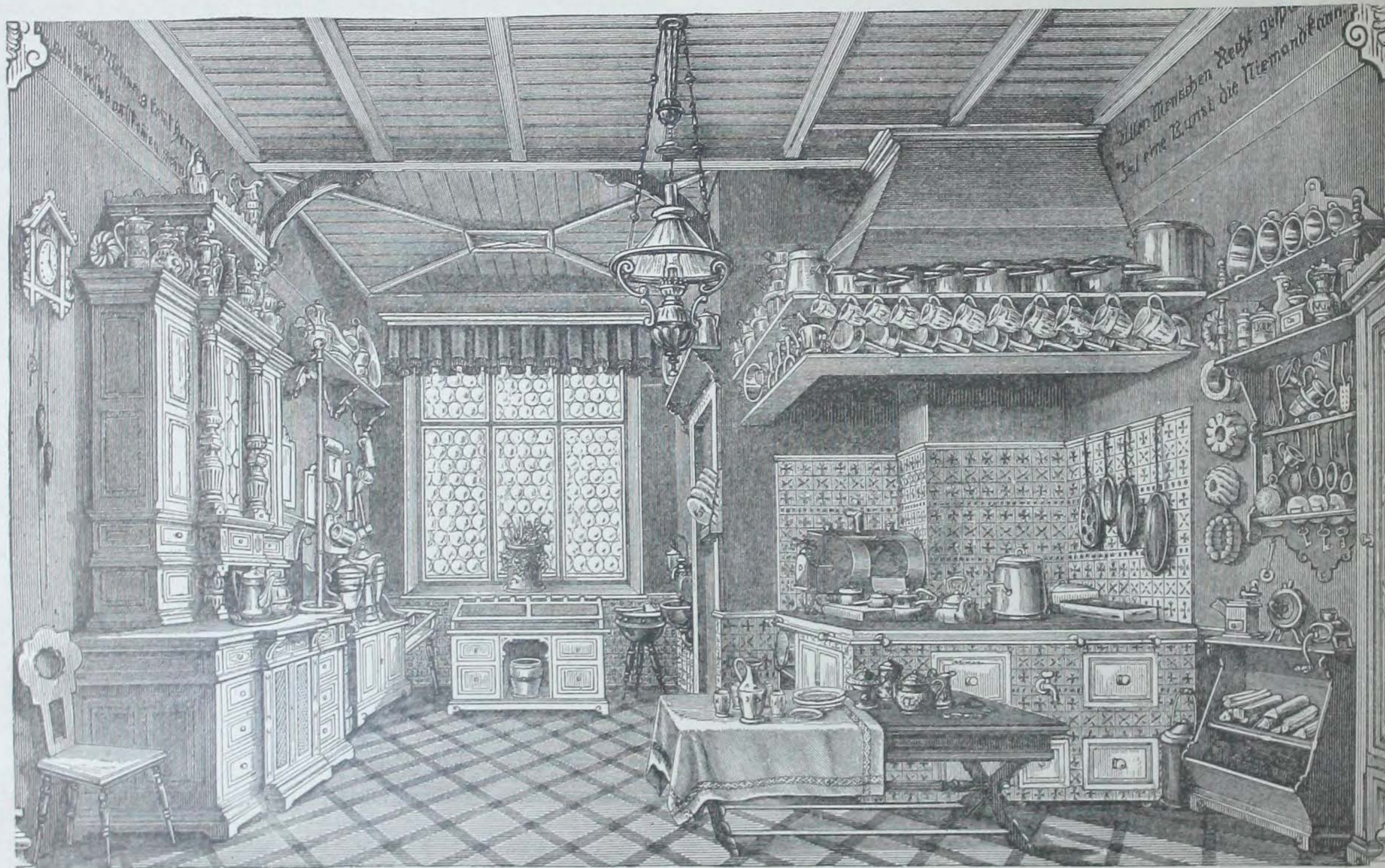
WALL AND CEILING PAPERS.

Having treated of furnishing the home in a concise and comprehensive manner, and given some valuable advice to buyers of furniture, we proceed to deal with some of the leading subjects involved in the furnishing and decoration of the house, in detail. In doing this we shall continue to assist the understanding of the reader, and to augment his pleasure in the perusal of these pages, by the plentiful use of illustrations. The present chapter is appropriated to wall and ceiling papers.

There are three methods commonly adopted for covering and decorating wall spaces—plain color in paint, paper or distemper; patterns in paper, textile fabrics, or paint, and

one among them that ever gave us an even momentary feeling of interest or pleasure? Some, as we said before, are harmless, that is to say, entirely uninteresting; but for the most part they are actually aggressive by their extreme crudeness. There is one, for instance, very much like that of lavender kid gloves, that is used often in distemper and paint, and mixed with pure white or white and gold in papers. The effect is one of astonishing repulsiveness. It possesses no brilliancy, no depth, no warmth, no interest or beauty of any kind. It is unsuitable for pictures, and clashes with almost every tint that is brought near to it.

The only thing that can be done in this matter is to appeal to every one's own taste as far as possible, and to try and make them exercise their judgment. Do not let us be content, on the one hand, with gloominess and dullness; let us avoid with horror, on the other



A GERMAN IDEAL KITCHEN.

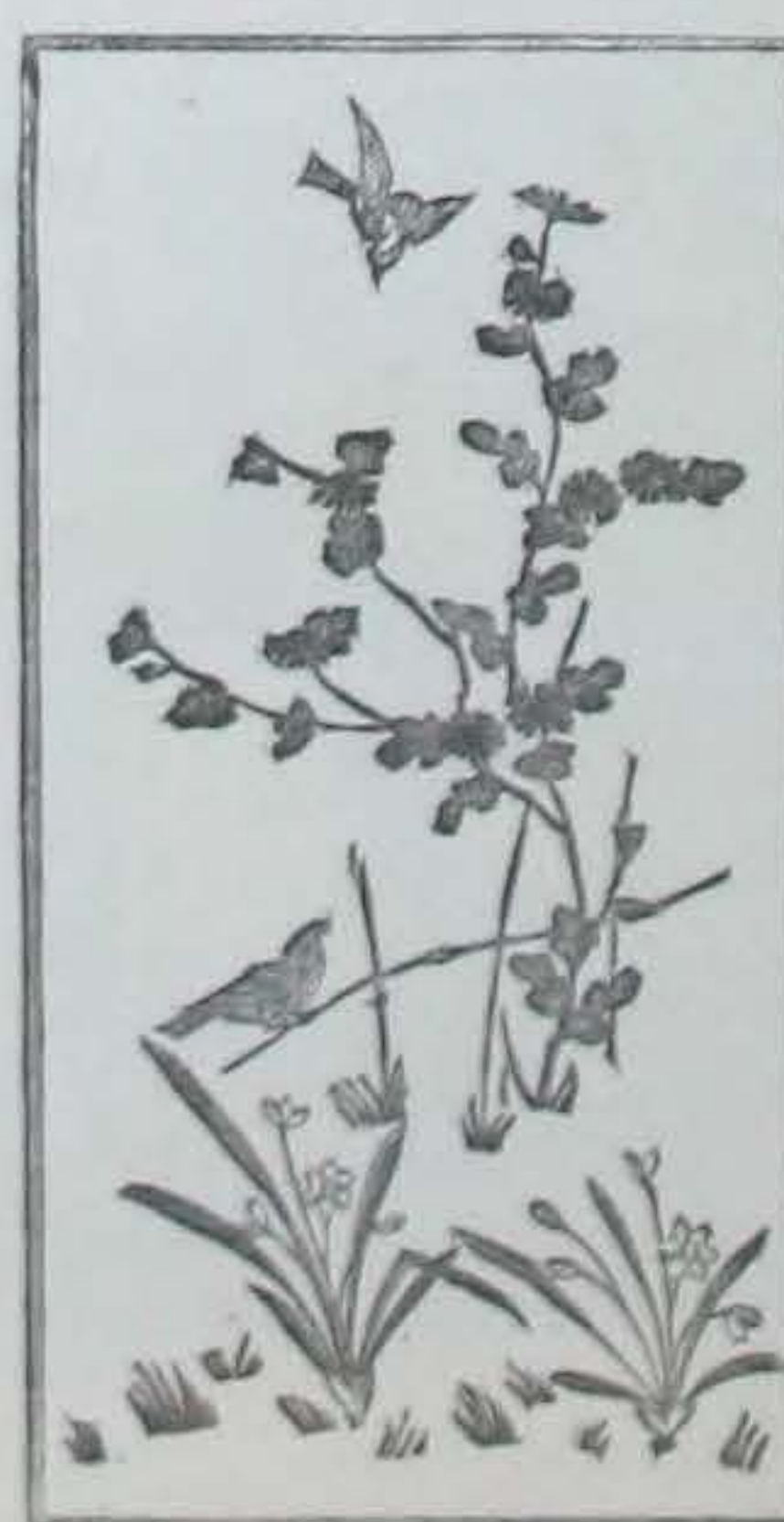
panelling. If the first method be employed, all the interest of the wall surfaces is made to depend upon color. There can be no objection to this; a plain surface of color may be a beautiful thing provided it be adapted for its purpose. But unfortunately it is in rare exceptions only that we find walls of suitable tones. Those most usually used are pale green and yellowish drab. It will be said that these are harmless; and, to a certain extent, this defense is true. But it must be borne in mind that the harmless is not a very high ideal to aspire to, and that it is this inability in most of us to make our walls better than harmless

hand, all crudeness and mere showiness. Let us be careful that the color chosen shall be one not merely beautiful in small quantities, as for instance scarlet or bright blue, but suitable to covering large spaces, and sufficiently quiet to be a permanent rest to the eyes.



SIMPLE CEILING DECORATION.

that drives us to seek relief in vast sized mirrors or other coarse decorations to give some life to our rooms. If we are fortunate enough to possess good pictures the problem is simple. All we have to do is to paint, paper, or distemper the walls with such a tint as shall form a good background, without interfering with the pictures. A rich brownish green will be found one of the best for this purpose. If, however, we have no pictures, or very few, we must depend on the beauty of our wall decorations themselves. Now if we call to mind the colors that we have seen on the walls in our friends' houses, is there any



WALL-PAPER PANEL DESIGNS.

When wall-papers printed in patterns are used, there are further considerations which should guide our choice. It should be borne in mind, however, that although in these cases more than one color is employed, yet there is a general effect of harmonious blending of tone together which should be sought after, an effect best seen at such a distance that the pattern ceases to be very distinct. This general effect is analogous to one tint, and should

be considered in the same light. Many papers when viewed from certain distances give undue prominence to one particular feature, owing to its color not being in proper harmony with those of the other features of the design; and the constant repetition of the pattern over the wall surface often causes the prominent features to be arranged in lines and figures in themselves unpleasing, though all the lines and figures of the design unpeated may be faultless. Before a wall-paper is chosen, therefore, care should be taken that two or three breadths are placed side by side in order to detect this secondary pattern, if it exists. Exactly the same effect may be produced without prominence in color by the unequal distribution of the design. Supposing, for instance, it is printed light on a dark ground, and owing to this fault the pattern is thicker in some places than in others, then the thick parts viewed from a short distance will make little masses of light, and the thin parts little masses of dark color, which may make on a large surface a secondary pattern of unpleasing appearance.

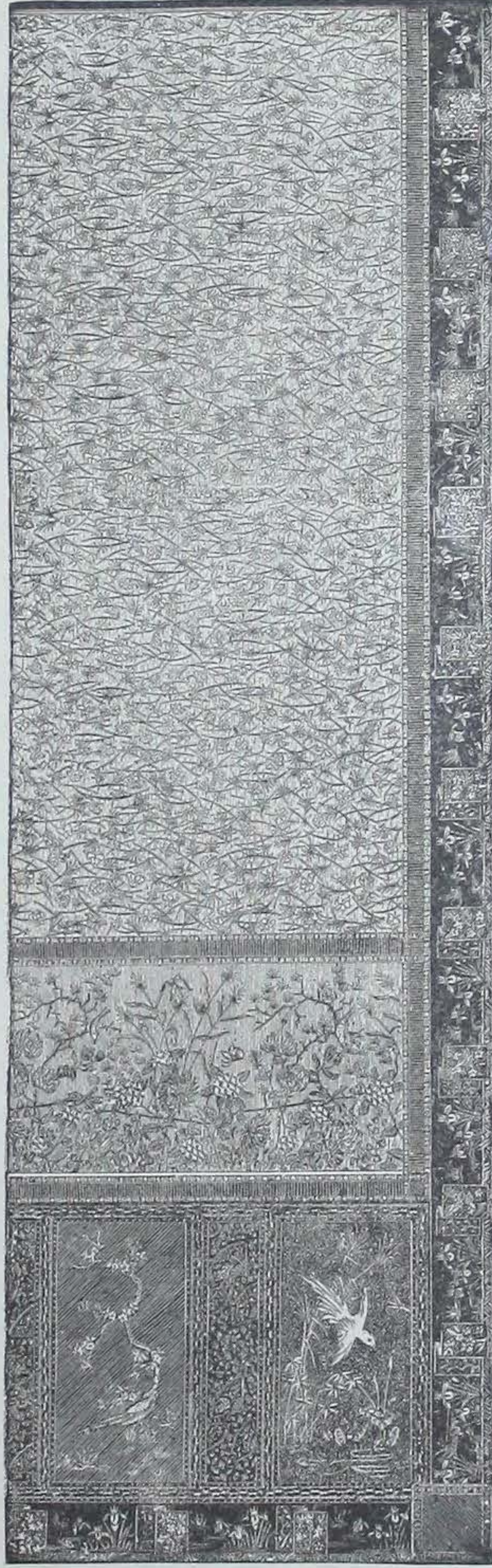
But besides the production of general effect at such a distance that the primary design cannot be distinctly seen, we have to consider the latter itself, the curves of its lines, and the

do, however, is to make use of certain forms suggested to us by nature which will be really suitable to the positions they have to occupy, which will be pliable, that is to say, capable of being worked up into a continuous, evenly-distributed, and well-arranged design, and which will be besides all this very beautiful in themselves. Such idealizations from nature are the honeysuckle pattern of the Assyrians and Greeks; the wonderful stone carvings which fill mediæval churches, so renowned for the appreciation they reveal of the most subtle forms of birds, beasts and flowers; the Persian designs for ceilings, textile fabrics, pottery, and paintings, unrivalled for intricacy of form without confusion, grace of line without weakness, and brilliancy of color without gaudiness; the flowing friezes of Renaissance times, so faultless in their curves.

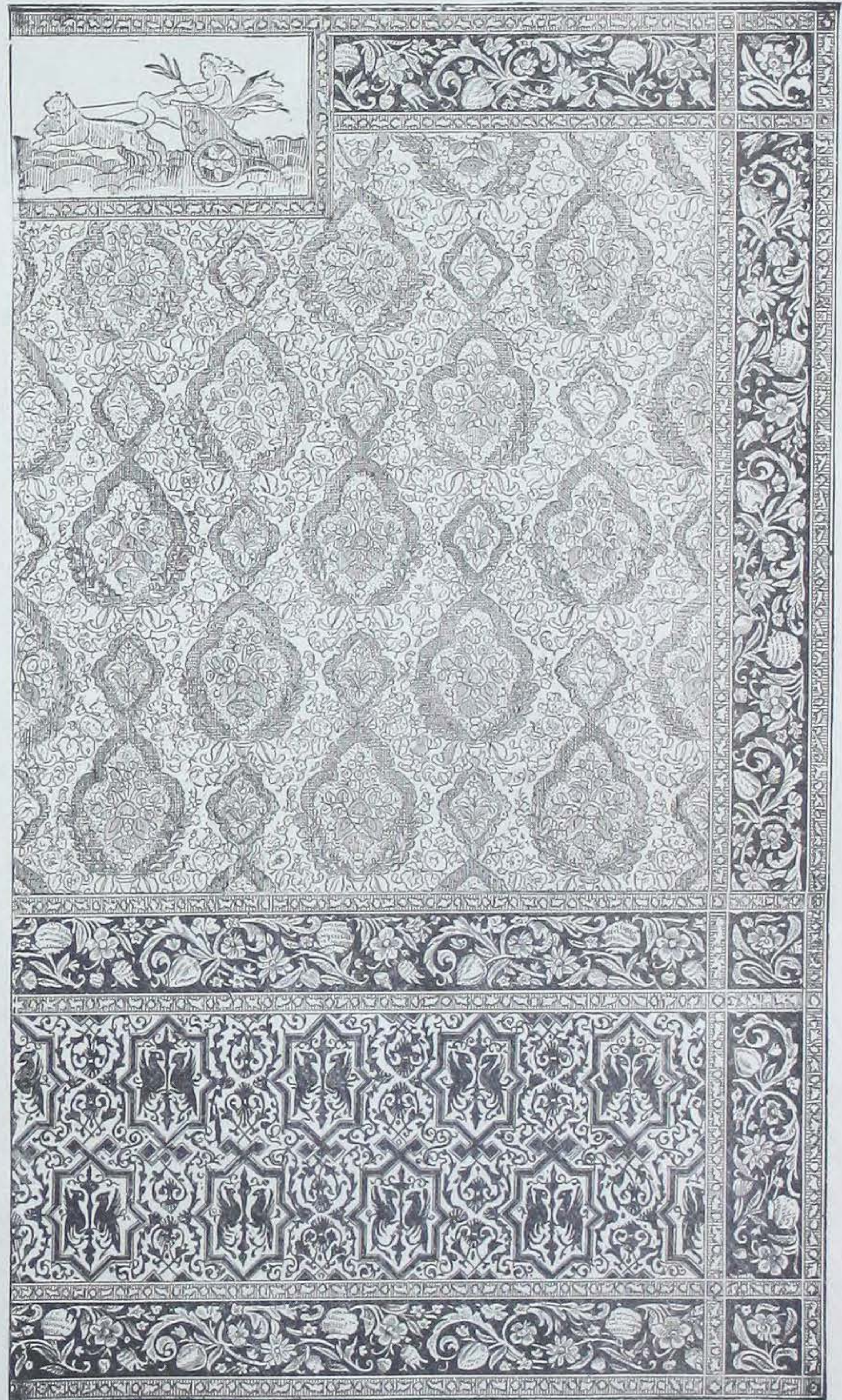
There is another class of papers in which the main part of the pattern is geometrical. Papers of this kind are often very satisfactory, but do not usually possess as much interest as those involving free curves. They are, however, often very suitable to passages and halls, and may be used with advantage in places where something a little less monotonous than a plain surface of color is required. The geometrical patterns should always be



WALL-PAPER DESIGN.



CEILING-PAPER DESIGN.



WALL-PAPER DESIGN.—HALF SECTION.

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The selection of the dominant colors in the decoration of walls by means of paper is a matter of supreme importance.

Yellow is not a color that can be used in masses unless it be much broken or mingled with other colors, and even then it wants some material to help it out, which has great play of light and shade in it. The light bright yellows, like jonquil and primrose, are scarcely usable in art, save in silk, whose gleam takes color from and adds light to the local tint, just

CHAPTER IX.

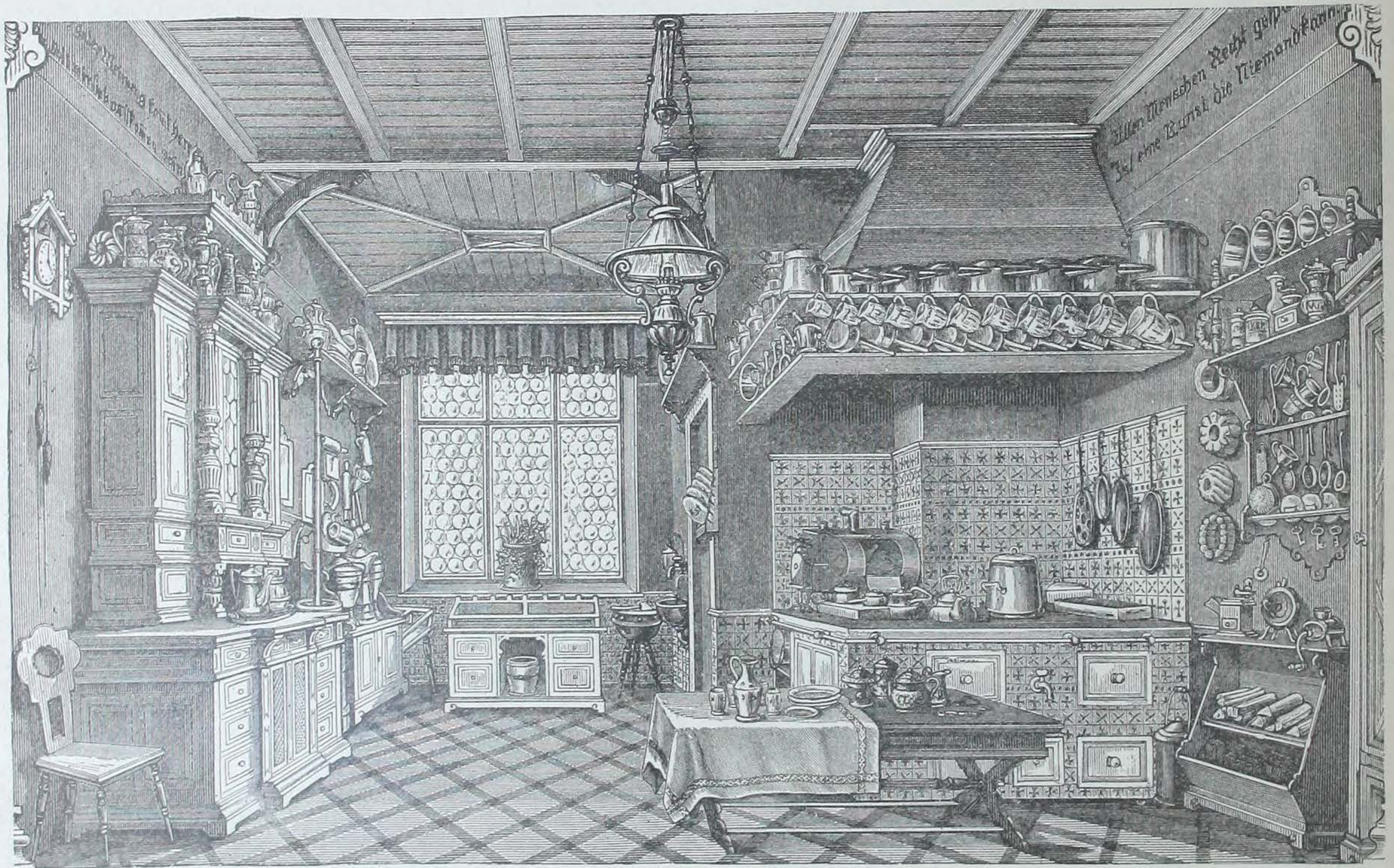
WALL AND CEILING PAPERS.

Having treated of furnishing the home in a concise and comprehensive manner, and given some valuable advice to buyers of furniture, we proceed to deal with some of the leading subjects involved in the furnishing and decoration of the house, in detail. In doing this we shall continue to assist the understanding of the reader, and to augment his pleasure in the perusal of these pages, by the plentiful use of illustrations. The present chapter is appropriated to wall and ceiling papers.

There are three methods commonly adopted for covering and decorating wall spaces—plain color in paint, paper or distemper; patterns in paper, textile fabrics, or paint, and

one among them that ever gave us an even momentary feeling of interest or pleasure? Some, as we said before, are harmless, that is to say, entirely uninteresting; but for the most part they are actually aggressive by their extreme crudeness. There is one, for instance, very much like that of lavender kid gloves, that is used often in distemper and paint, and mixed with pure white or white and gold in papers. The effect is one of astonishing repulsiveness. It possesses no brilliancy, no depth, no warmth, no interest or beauty of any kind. It is unsuitable for pictures, and clashes with almost every tint that is brought near to it.

The only thing that can be done in this matter is to appeal to every one's own taste as far as possible, and to try and make them exercise their judgment. Do not let us be content, on the one hand, with gloominess and dullness; let us avoid with horror, on the other



A GERMAN IDEAL KITCHEN.

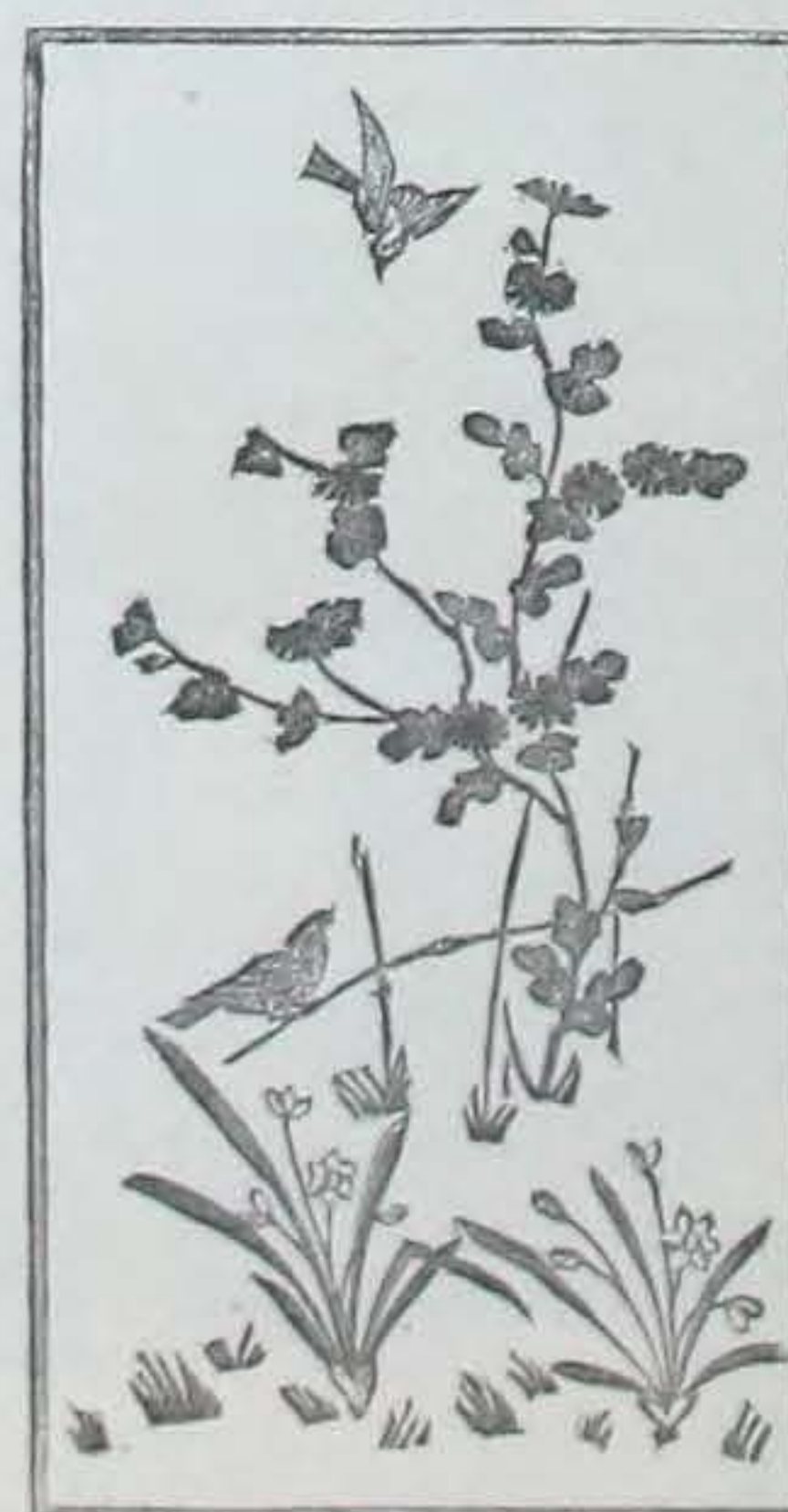
panelling. If the first method be employed, all the interest of the wall surfaces is made to depend upon color. There can be no objection to this; a plain surface of color may be a beautiful thing provided it be adapted for its purpose. But unfortunately it is in rare exceptions only that we find walls of suitable tones. Those most usually used are pale green and yellowish drab. It will be said that these are harmless; and, to a certain extent, this defense is true. But it must be borne in mind that the harmless is not a very high ideal to aspire to, and that it is this inability in most of us to make our walls better than harmless

hand, all crudeness and mere showiness. Let us be careful that the color chosen shall be one not merely beautiful in small quantities, as for instance scarlet or bright blue, but suitable to covering large spaces, and sufficiently quiet to be a permanent rest to the eyes.



SIMPLE CEILING DECORATION.

that drives us to seek relief in vast sized mirrors or other coarse decorations to give some life to our rooms. If we are fortunate enough to possess good pictures the problem is simple. All we have to do is to paint, paper, or distemper the walls with such a tint as shall form a good background, without interfering with the pictures. A rich brownish green will be found one of the best for this purpose. If, however, we have no pictures, or very few, we must depend on the beauty of our wall decorations themselves. Now if we call to mind the colors that we have seen on the walls in our friends' houses, is there any



WALL-PAPER PANEL DESIGNS.

When wall-papers printed in patterns are used, there are further considerations which should guide our choice. It should be borne in mind, however, that although in these cases more than one color is employed, yet there is a general effect of harmonious blending of tone together which should be sought after, an effect best seen at such a distance that the pattern ceases to be very distinct. This general effect is analogous to one tint, and should

be considered in the same light. Many papers when viewed from certain distances give undue prominence to one particular feature, owing to its color not being in proper harmony with those of the other features of the design; and the constant repetition of the pattern over the wall surface often causes the prominent features to be arranged in lines and figures in themselves unpleasing, though all the lines and figures of the design unpeated may be faultless. Before a wall-paper is chosen, therefore, care should be taken that two or three breadths are placed side by side in order to detect this secondary pattern, if it exists. Exactly the same effect may be produced without prominence in color by the unequal distribution of the design. Supposing, for instance, it is printed light on a dark ground, and owing to this fault the pattern is thicker in some places than in others, then the thick parts viewed from a short distance will make little masses of light, and the thin parts little masses of dark color, which may make on a large surface a secondary pattern of unpleasing appearance.

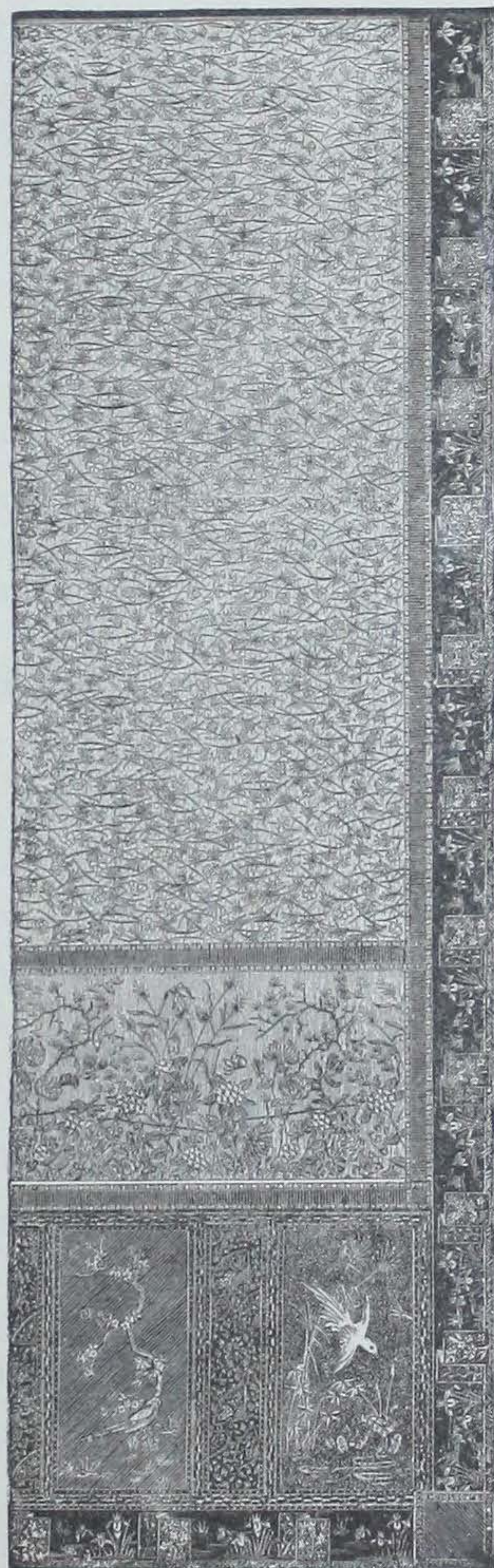
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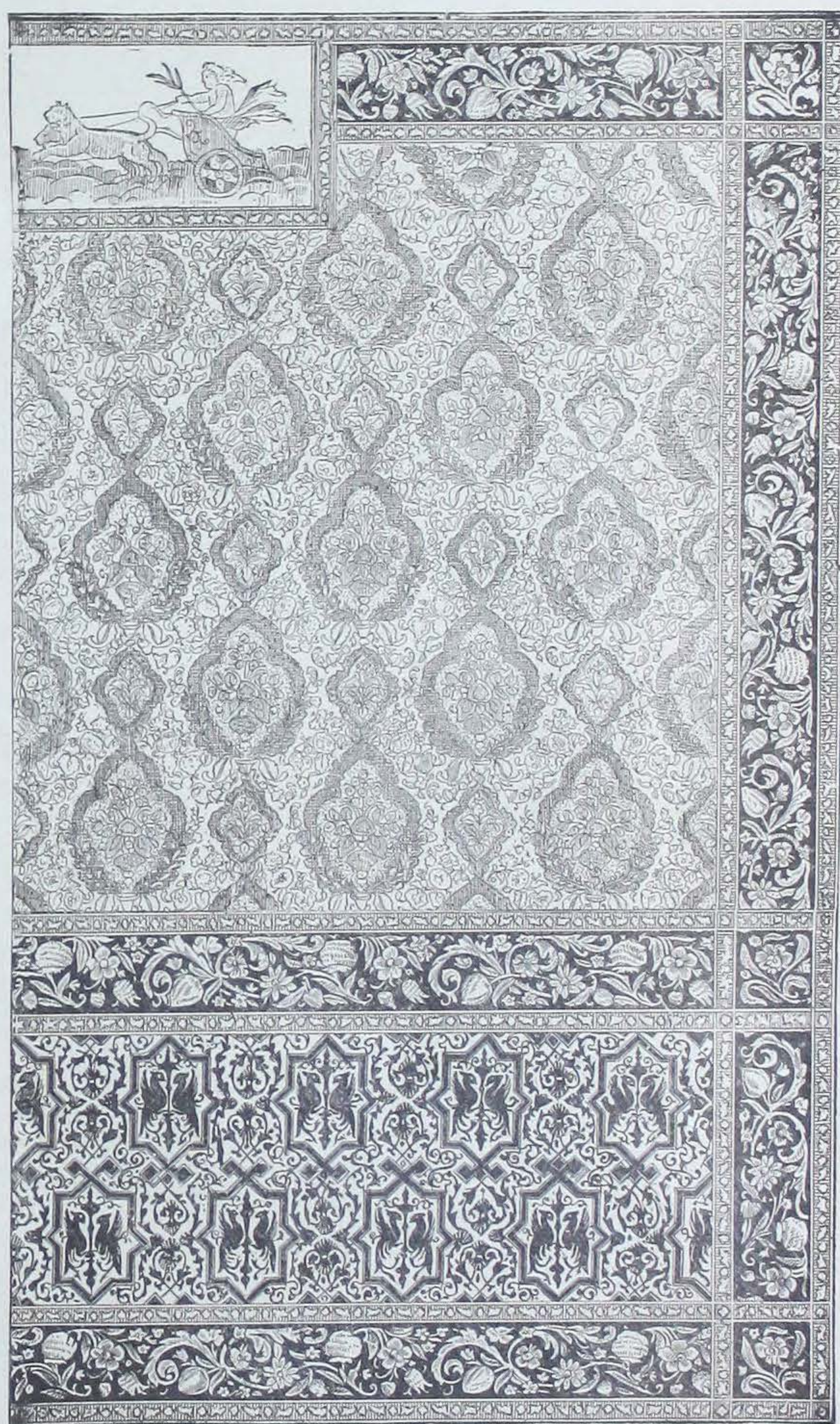
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as sunlight does to the yellow blossoms which are so common in nature. In dead materials, such as distemper color, a positive yellow can only be used sparingly in combination with other tints.

Red is also a difficult color to use, unless it be helped by some beauty of material, for whether it tend toward yellow and be called scarlet, or toward blue and be crimson, there is but little pleasure in it, unless it be deep and full. If the scarlet pass a certain degree of impurity it falls into the hot brown-red, very disagreeable in large masses. If the crimson be much reduced it tends toward a cold color called in these latter days magenta, impossible for an artist to use either by itself or in combination. The finest tint of red is a central one between crimson and scarlet, and is a very powerful color indeed, but scarce to be got in a flat tint. A crimson broken by grayish-brown, and tending toward russet, is also a very useful color, but, like all the finest reds, is rather a dyer's color than a house painter's.

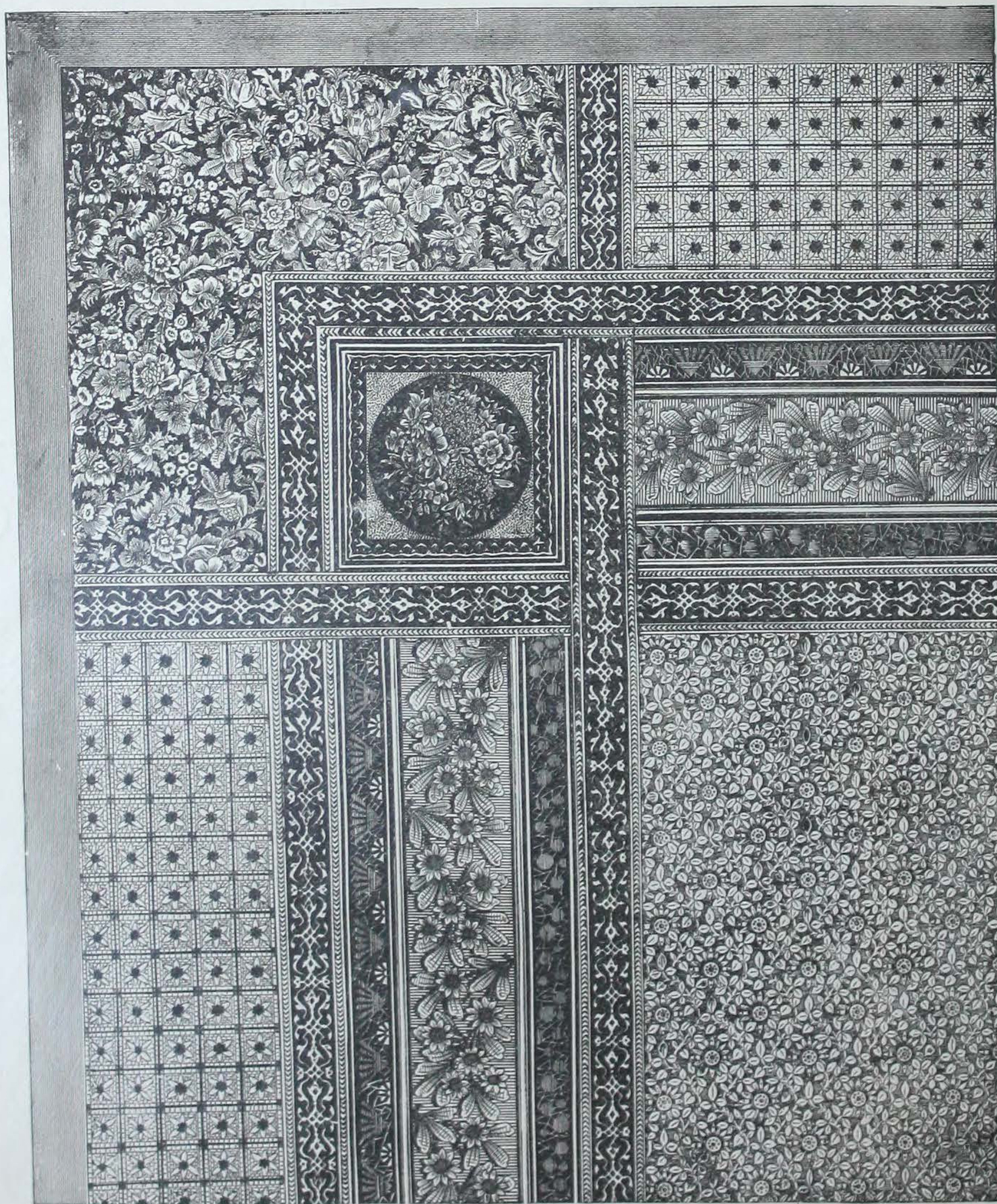
Pink, though one of the most beautiful colors in combination, is not easy to use as a

so blue is especially a pigment and an enamel color; the world is rich in insoluble blues many of which are practically indestructible.

There are not many tints fit to color a wall with. A solid red, not very deep, but rather describable as a full pink, and toned both with yellow and blue, a very fine color if you can hit it. A light orangy pink, to be used rather sparingly. A pale golden tint, namely, a yellowish-brown; a very difficult color to hit. A color between these two last—call it pale copper color. All these three must be prepared with great care. If they are muddy or dirty failure is inevitable.

Tints of green from pure and pale to deepish and gray; always remembering that the purer the paler, and the deeper the grayer.

Tints of pure pale blue from a greenish one, the color of a starling's egg, to a gray ultramarine color, hard to use because so full of color, but incomparable when right. In these one must carefully avoid the point at which the green overcomes the blue and turns it rank, or that at which the red overcomes the blue and produces those woeful hues of



CEILING-PAPER DESIGN.

flat tint even over moderate spaces; the more orangy shades of it are the most useful, a cold pink being a color much to be avoided.

As to purple, no one in his senses would think of using it bright in masses. In combination it may be used somewhat bright, if it be warm and tend toward red; but the best and most characteristic shade of purple is nowise bright, but tends toward russet.

The decorator should be very careful of bright greens, and seldom, if ever, use them at once bright and strong. He should also beware of dirty greens.

But if green be called a work-a-day color, surely blue must be called the holiday one, and those who long most for bright colors may please themselves most with it; for if you duly guard against getting it cold if it tend toward red, or rank if it tend toward green, you need not have much fear of its brightness. Now, as red is above all a dyer's color,

pale lavender and starch blue which have not seldom been favorites with decorators of elegant drawing-rooms and respectable dining-rooms.

In the decoration of the ceiling simple patterns in cream color on blue ground, but having a black outline, look well. Gold ornaments on a deep blue ground with black outline are also rich and effective. These are all, however, simple treatments, for any amount of color may be used in a ceiling, provided the colors are employed in very small masses, and perfectly mingled, so that the effect produced is that of a rich colored bloom. A ceiling should be beautiful, and should also be manifest; but if it must be somewhat indistinct, in order that the caprices of the ignorant be humored, let the pattern be in middle tint or pale blue and white only.

We like to see the ceiling of a room covered all over with a suitable pattern, but not a

all object to a large central ornament only, or to a central ornament and corners, especially if the cornice is heavy, so as to give compensating weight to the margin.

A ceiling is a flat surface, hence all decoration placed upon it should be flat also.

A picture can only be correctly seen from one point, whereas the decoration of a ceiling should be of a character that it can be properly seen from any part of the room.

Pictures have almost invariably a right and wrong way upward. A picture placed on a ceiling is thus wrong way upward to almost all the guests in the room.

In order to the proper understanding of a picture, you must see the whole of its surface at one time; this is very difficult to do without almost breaking your neck, or being on your back on the floor, if the picture is on the ceiling, whereas an ornament which consists of repeated parts may render a ceiling beautiful without requiring that the whole ceiling be seen at one glance.

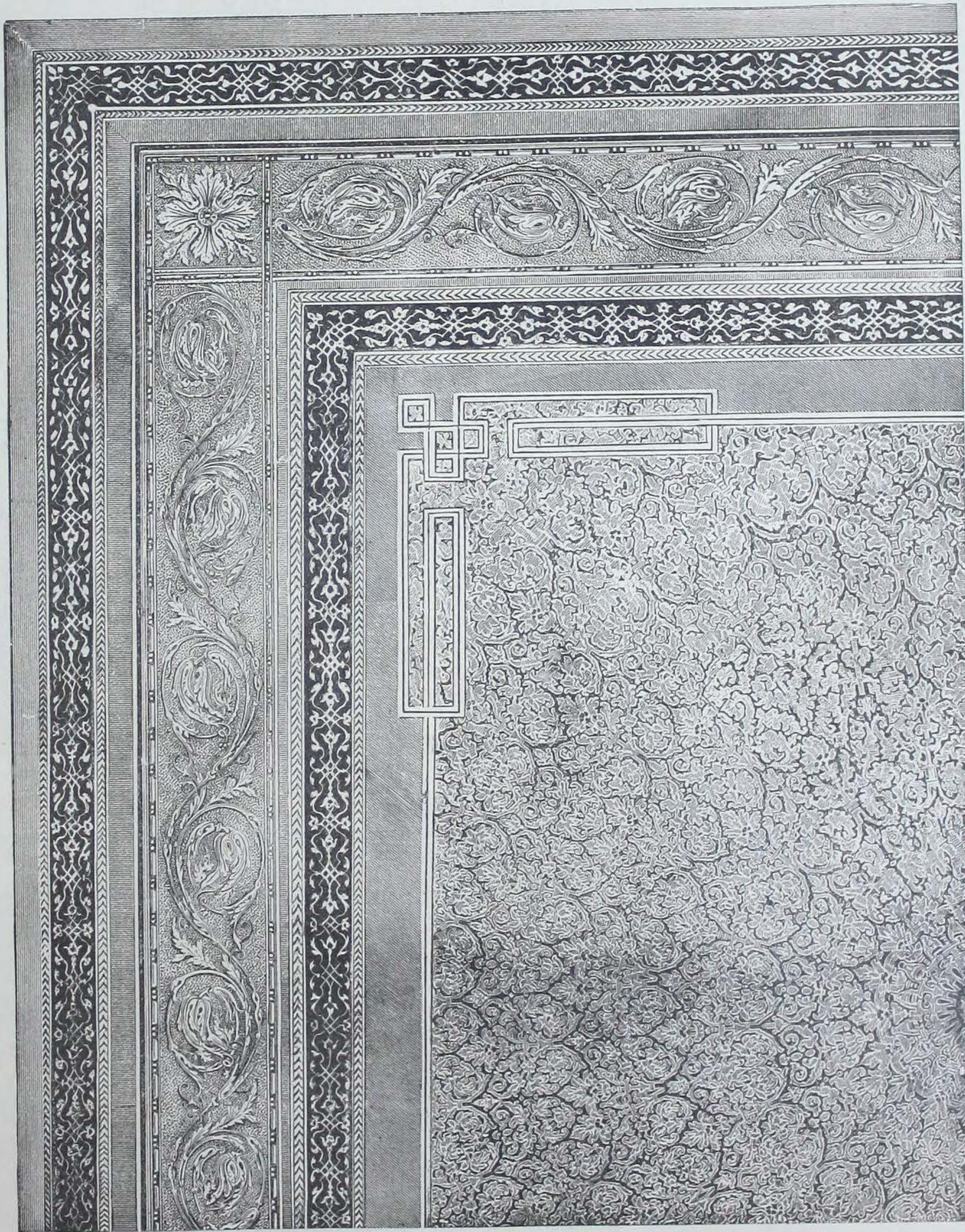
Arabesque ceilings are also very objectionable. What can be worse than festoons of leafage, like so many sausages, painted upon the ceiling, with griffins, small framed pic-

sential, or, as in many cases, desirable. It is strange that so few of our houses and public buildings contain rooms with decorated ceilings, but the want is already felt, the fashion has set in, and many are at this present moment being prepared. We must get simple modes of enrichment for general rooms—modes of treatment which shall be effective, and yet not expensive—and then we may hope that they will become general.

CHAPTER X.

GLASS FOR HOME DECORATION.

The beauty of colored glass adapts it excellently well to various purposes in the decoration of home. Its ornamental uses in windows and doors, for the purposes of the table, toilet, etc., occur at once to the perception of every reader. Visitors to our largest cities are familiar with rich specimens of colored glass, presenting figures, groups, and scenes of wonderful beauty, adapted for employment in the windows of churches, and



CEILING-PAPER DESIGN.

tures, impossible flowers and feeble ornament, all with fictitious light and shade? But not content with such absurdities and incongruities the festoons often hang upward on vaulted or domed ceilings, rather than downward. Such ornaments arose when Rome, intoxicated with conquests, yielded itself up to luxury and vice rather than to a consideration of beauty and truth. Decorations like these were to an extent revived by the great painter Raphael; but it must ever be remembered that Raphael, while one of the greatest of painters, was no ornamentist. It requires all the energy of a life to become a great ornamentist; hence, it is not expected that the one man should be great at the two arts. In all ages where decorative art has flourished, ceilings have been decorated. The Egyptians decorated their ceilings; so did the Greeks, the Byzantines, the Moors, and the people of our Middle Ages, and a light ceiling appears not to have been esteemed as es-

for the doors and windows of libraries and conservatories in the establishments of wealthy persons. Mosaics in stained glass presenting a great variety of designs, are cheaper and increasingly used, and are preferred to draperies, in many cases, for the upper sashes of windows. Country houses are readily embellishable by their use to fill tiny window spaces, which, otherwise treated, are a source of annoyance to the occupants. Bookcases, bath-room doors, the panels in drawing-room doors, vestibule doors, fan-lights and fire-screens offer opportunities for the use of stained glass, which may be purchased at rates proportioned to the labor bestowed upon the multifarious designs in which it is prepared for the market. Illustrations of charming designs adapted to many uses, accompany this chapter.

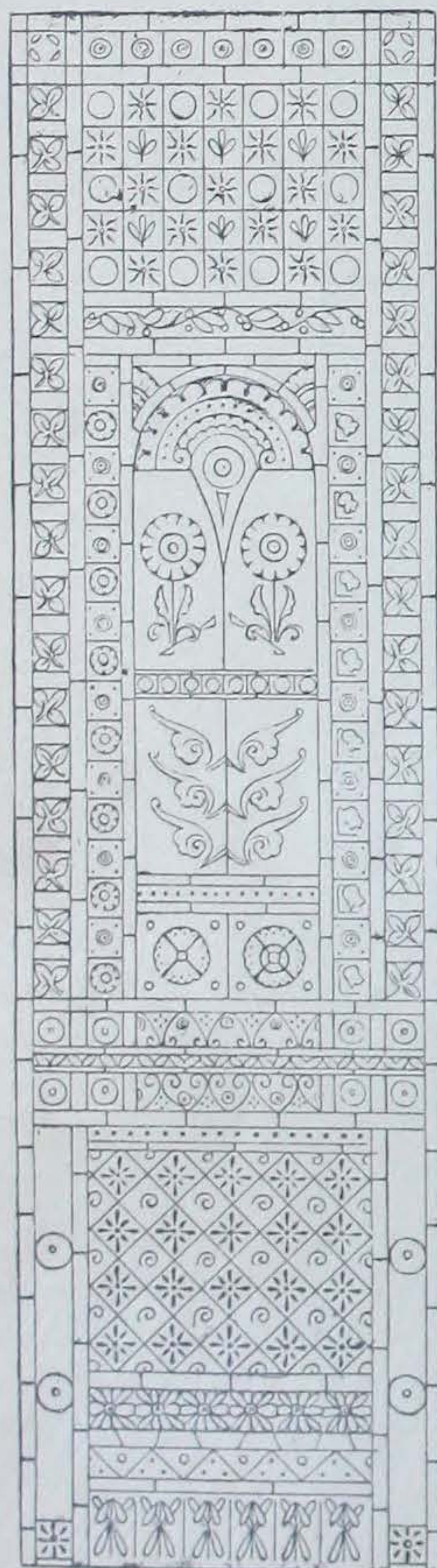
Happily no inconsiderable number of citizens find amusement in painting upon glass, an

art which cannot be too highly commended. There are two ways in which such persons can practice this delightful pursuit, namely, with varnish, or transparently, in water-colors. The first of these is best for windows, and ground glass is best to paint upon. The following colors will be needed, in fine powder, mixed, when used, with picture copal varnish; diluted, when necessary, with spirits of turpentine:

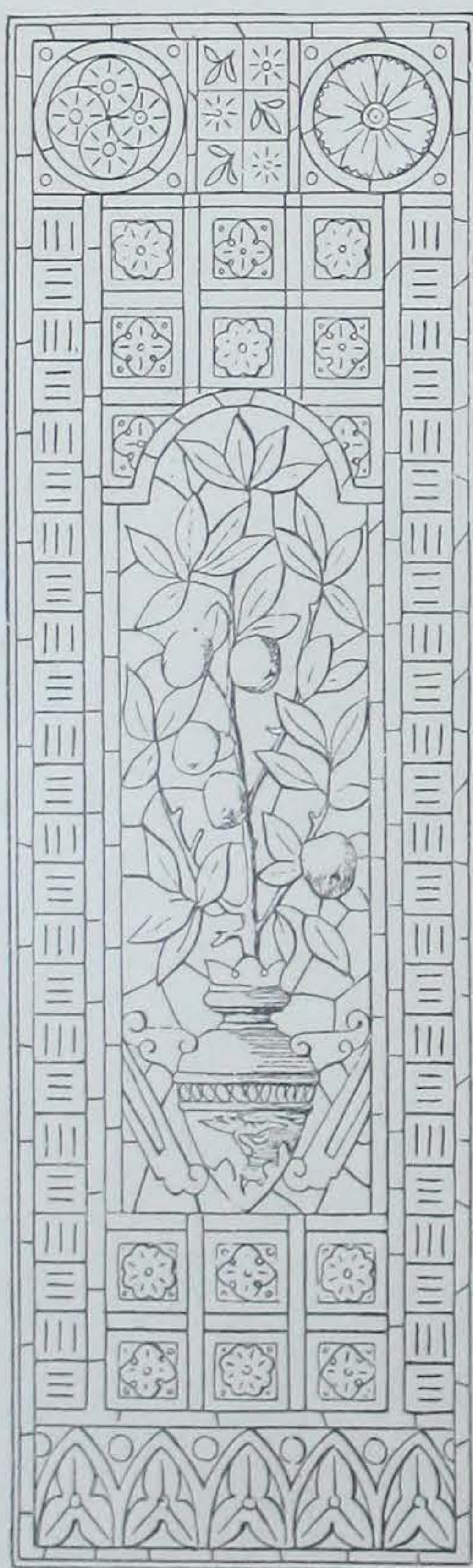
Raw and Burnt Sienna,
Rose Madder,
Brown Pink,
Yellow Lake,
French Ultramarine,
Verdigris,

Burnt Umber,
Carmine (or
Crimson Lake),
Gamboge,
Prussian Blue,
Ivory-black, opaque.

A few sable pencils, a flat camel's-hair brush, some picture copal varnish, and a little spirits of turpentine are also necessary. The materials being ready, proceed as follows: Lay the glass flat on the print or drawing to be copied, and with a very fine sable pencil and ivory-black, mixed with varnish, trace all the outlines. When thoroughly dry, raise it to a slanting position, by placing it upon a frame with pieces of upright wood on either side, and a sheet of white paper flat beneath it; by this means the effect of the coloring will be better seen, which may at once be proceeded with. One caution is perhaps here neces-



STAINED-GLASS VESTIBULE DOORS.



sary: be careful not to rub up the black in the coloring, as it is liable to smear if much worked over. On this account moist ivory-black is frequently, and with advantage, substituted for putting in the outline. It may be used with a pen most conveniently, fine or coarse at the points, according to the nature of the work. When finished, the painting should be fixed up in the window with the unpainted side outwards.

A few hints as to mixing the colors may be useful. The nearest approximation to scarlet is made by the admixture of gamboge with rose madder, crimson lake, or carmine; for greens, verdigris is very brilliant, and almost every shade may be made by adding yellow lake or brown pink in different proportions. When a flat, even tint is required, the camel's-hair brush is used, and a dabber (made by simply covering a little cotton wool with fine leather), which is particularly useful for backgrounds in figure subjects and skies and landscapes, and this applies also to the use of water-colors. When the painting is finished it must be varnished.

Painting glass transparently in water-colors is decidedly the best method for magic-lantern slides. Plain clear glass should always be used, except for windows, when ground glass may be substituted with advantage. The glass should be washed over with a piece of rag and a little gall; this removes any greasiness there may be upon it. The colors are manufactured expressly for the work.

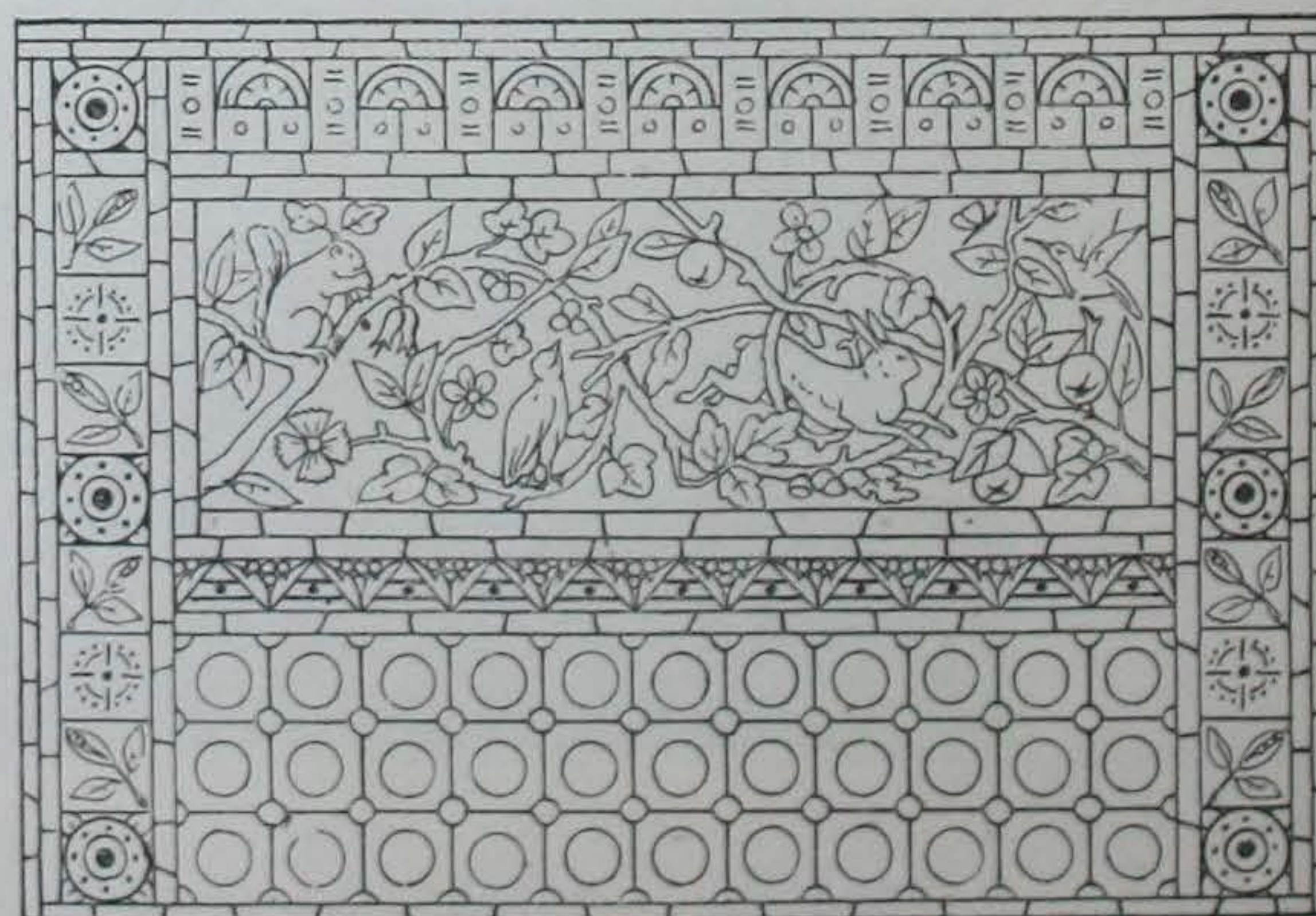
Small subjects are most effectively painted in water-colors, as a finish and delicacy are attainable impossible in the use of varnish-colors.

The outline should be made with a pen charged with liquid color, containing a small portion of oxgall, and should be varnished with thin mastic varnish before any attempt is made to work upon it. The colors being placed upon the palette, and diluted with water, we proceed in the same manner as in painting varnish-colors. These colors dry rapidly, but it is necessary between each layer of color to give the glass or that portion of it which has been worked upon, a slight coating with varnish, to prevent the second color wiping off or rubbing up the first; for this purpose it is desirable to use the enamel varnish made expressly for glass-painting.



MUSIC-ROOM PAINTED WINDOWS.

Admirers of the dainty vessels produced in glass, will be glad to learn that the art of manufacturing these is advancing step by step. For example, the art of embedding gems and gold in glass, practiced by the Romans and long mourned as lost, has been revived. A

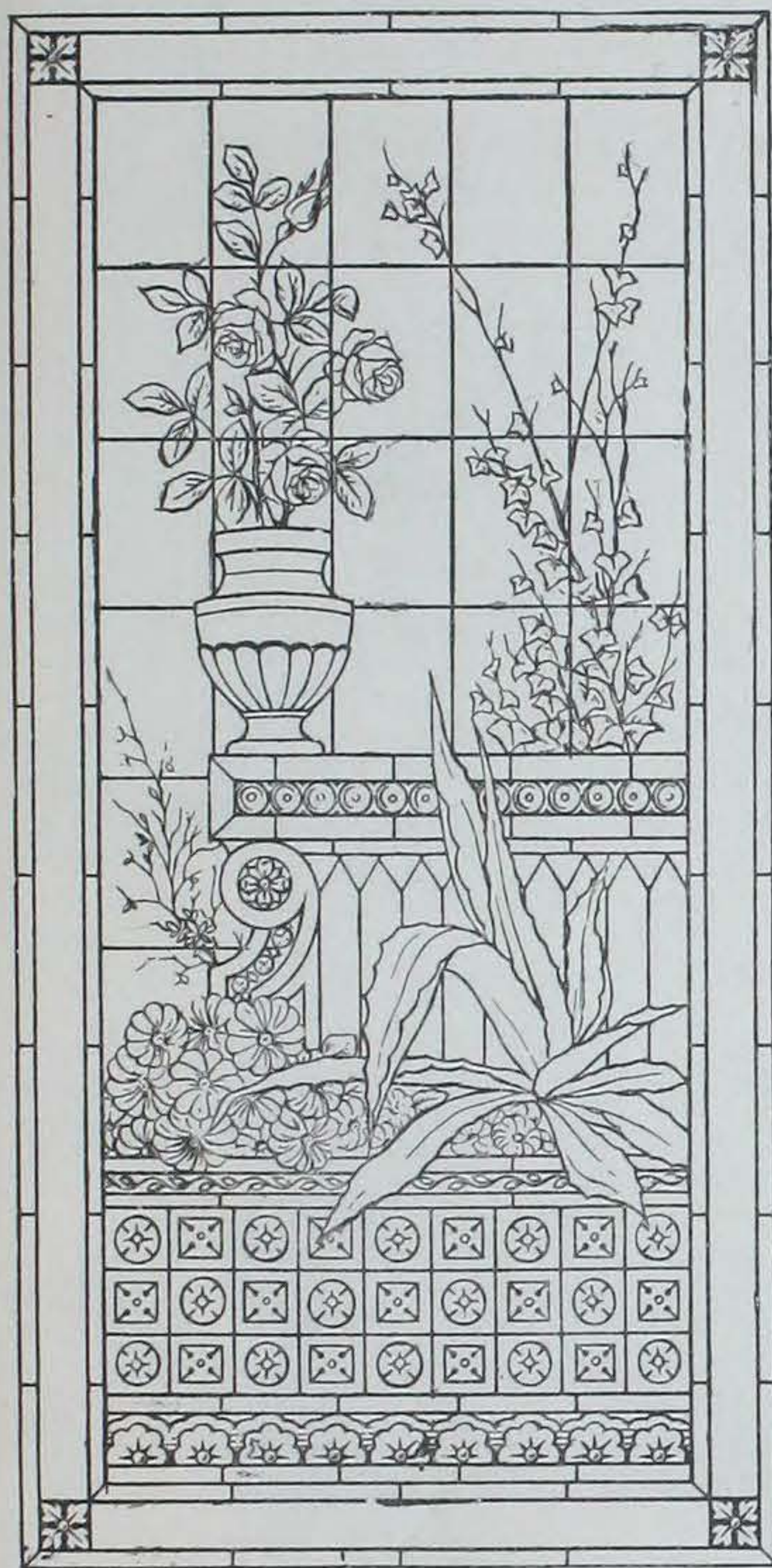


STAINED GLASS HALF-WINDOW.

short time ago, a French gentleman, M. d'Humy, re-invented the process, by means of which, among other things, he is able to divide silver and gold in a minute form, for the beautification of glass vessels. He effects this by blowing a piece of glass in a cylindrical or other shaped mould, the latter being heated to a high temperature, and the glass article itself left open at its upper part. The operation is repeated in a mould of smaller diameter, and the smaller article is covered either wholly or partially with leaf gold or metallic powder, which must, however, in either case be thin enough to become broken up or

divided by the expansion of the glass. The smaller cylinder is next introduced into the first, and then more molten "metal" is blown into the former, so that the three layers become amalgamated, the gold or silver being between. The finishing processes subsequently employed are those ordinarily in use. The procedure varies more or less if it is intended to produce regular designs, or to introduce monograms in solid metal, but the above is for all practical purposes the method generally followed to effect the fusion of gold or silver with glass.

The effects obtained by these layers of gold—whether solid, granulated, or mottled—are in some cases extremely pleasing, the decorative appearance of the glass being much



STAINED-GLASS WINDOWS.

enhanced by what is actually a substratum of gold, silver, or platinum. In the ruby-tinted, green and other colored glasses an exceptional brilliancy is thus obtained. The articles consist principally of smelling-bottles, table-glass, candlesticks, and a few minor pieces of a decorative character.

As glass stained or otherwise ornamented in colors, is now within the means of most persons who read this book, we hope that its use in the many ways suggested, will be pro-

SCHEME FOR LESSENING THE
JUGGLING OF
PICTURE-FRAMES

moted by our publication. To add that form and colors treated in glass, should be selected with due regard to harmony in the matters of symmetry and colors in the arrangement of the rooms which they are intended to beautify, is, we trust, quite unnecessary.

CHAPTER XI.

HOW TO HANG PICTURES.

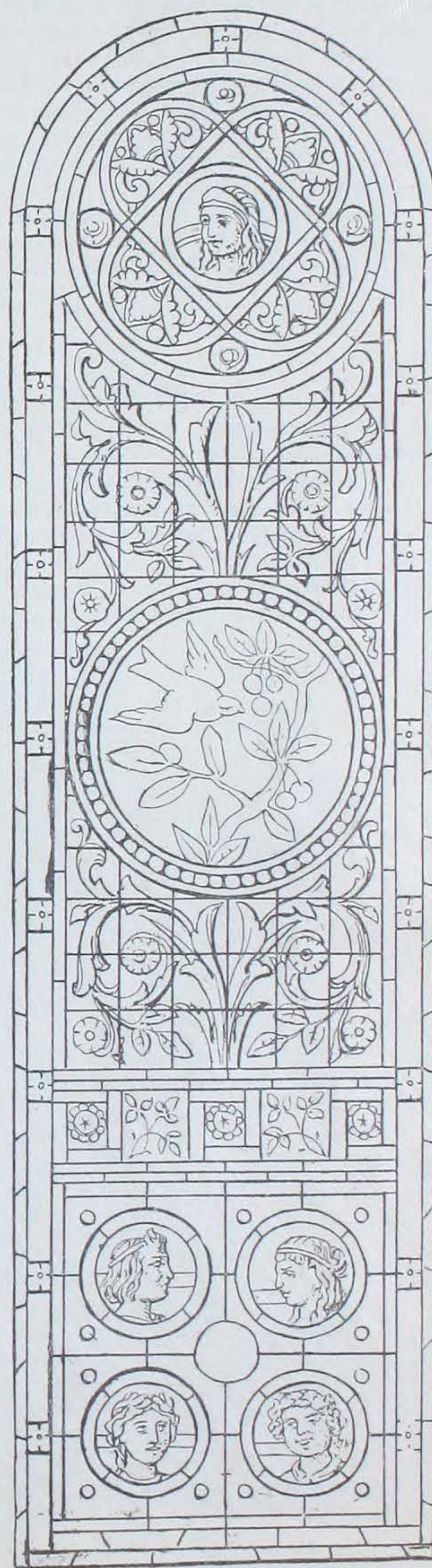
The arrangement of pictures symmetrically so as to produce a sort of uniformity in size and disposition is always pleasing, as is all true symmetry. In a small room the eye takes in the whole of the picture at a glance and rests with content upon such a disposition of parts. On the other hand, if the pictures are of all sizes and hung without any regard to this principle, they look incongruous and anyhow, as if they were not worth the trouble of arranging properly. It is not always that our stock of pictures will be sufficiently near in size to enable us to distribute them equally. Still, if they are judiciously arranged, we may do away with the objection in a great measure. If it is engravings alone we have to hang, it is an easy matter to get them in pairs of a uniform size. With a mixture of oil paintings and engravings this cannot well be done, but with care and good taste even these may be so arranged that they will not clash with one another.

The practice of hanging pictures so that they shall project forward at their tops is a question of position as to light. When the light falls full upon a picture, whether a varnished oil painting or a framed engraving or water-color, there is a glare or brightness which prevents the whole of the picture from being seen. This is a common case, and the only means of avoiding it is to let the picture hang out from the top so that we can see the whole of it from any part of the room without this objectionable light upon its surface. This is effected by placing the rings of the frame low enough down to cause the picture to have the desired inclination. It is a good plan, when about hanging a room with pictures, to make a sketch of the proposed arrangement previous to commencing hanging. This saves much after-labor and vexation. The largest picture should always have a central position, so that those of a less size and form can be symmetrically grouped around it. The eye will be satisfied by such an arrangement. The character and form of the frames is a very important factor in the question. Engravings and water-color paintings should always have a broad margin to the mount and a narrow light frame. The margin serves to isolate the painting or engraving, and thus enables us to see its beauties to much greater advantage. This is more especially the case if the wall upon which they are hung has a pattern upon it. These frames should be alike in make and breadth as far as possible.

Oil paintings require a different and much heavier frame than water-colors and engravings. The principal object in both cases is to display the painting to the best advantage. The broad margin does this with water-colors, but the oil painting having no plain margin we must depend upon the frame to effect its isolation. In our opinion a great mistake is made in having these frames too elaborately ornamented. It is not the frame we want to exhibit but the picture, therefore anything tending to lead the eye from that is an error. The frame surrounding an oil painting should be broad and comparatively plain, as we thus separate and confine the picture so that the eye takes in the whole of it, without being confused or interfered with by any external object.

In the hanging of pictures there are several points necessary to be attended to in order that they may be safe and easily adjusted. A picture moulding firmly secured to the wall just underneath the cornice or frieze, upon which hooks are made to slide along, not only affords a firm support, but is an addition to the decoration of a room. This moulding may be made and fixed by any ordinary joiner, or may be bought at most of the paper-hanging establishments, in gilt, black, or in various woods in combination with gilt beads. The hooks also may be procured from the same source. Brass rods have been much used for hanging pictures from, but they are not so serviceable or neat-looking as a picture moulding, they are also soon spoiled by the action of the gas and moisture in the room, which eats into and destroys the lacquer. They are now but little used.

Strong wire, cord or line, both "gold" and "silver," is now made, of different thicknesses, for hanging pictures, and is admirably adapted for the purpose, being very thin but capable of bearing great weights. All picture-cords of whatever kind should be as near the



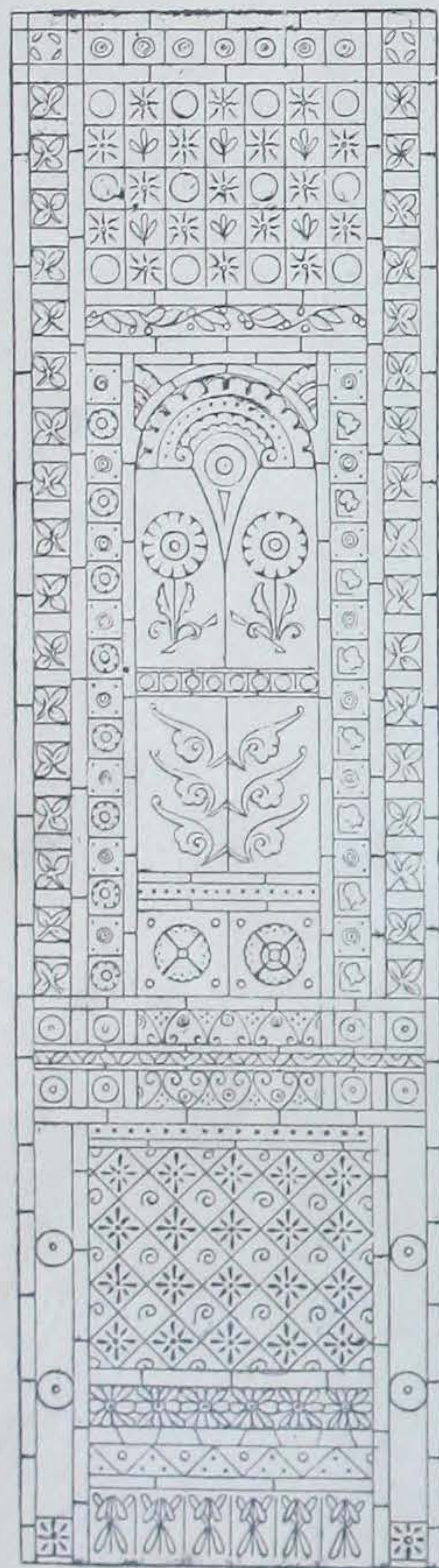
STAINED-GLASS VESTIBULE DOOR.

art which cannot be too highly commended. There are two ways in which such persons can practice this delightful pursuit, namely, with varnish, or transparently, in water-colors. The first of these is best for windows, and ground glass is best to paint upon. The following colors will be needed, in fine powder, mixed, when used, with picture copal varnish; diluted, when necessary, with spirits of turpentine:

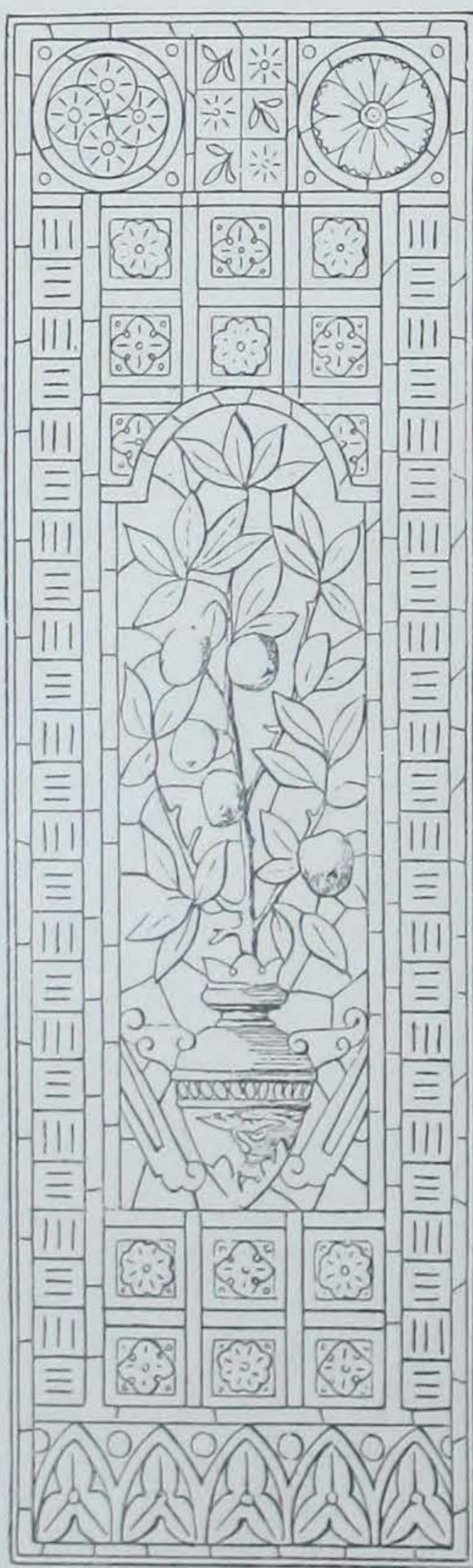
Raw and Burnt Sienna,
Rose Madder,
Brown Pink,
Yellow Lake,
French Ultramarine,
Verdigris,

Burnt Umber,
Carmine (or
Crimson Lake),
Gamboge,
Prussian Blue,
Ivory-black, opaque.

A few sable pencils, a flat camel's-hair brush, some picture copal varnish, and a little spirits of turpentine are also necessary. The materials being ready, proceed as follows: Lay the glass flat on the print or drawing to be copied, and with a very fine sable pencil and ivory-black, mixed with varnish, trace all the outlines. When thoroughly dry, raise it to a slanting position, by placing it upon a frame with pieces of upright wood on either side, and a sheet of white paper flat beneath it; by this means the effect of the coloring will be better seen, which may at once be proceeded with. One caution is perhaps here neces-



STAINED-GLASS VESTIBULE DOORS.



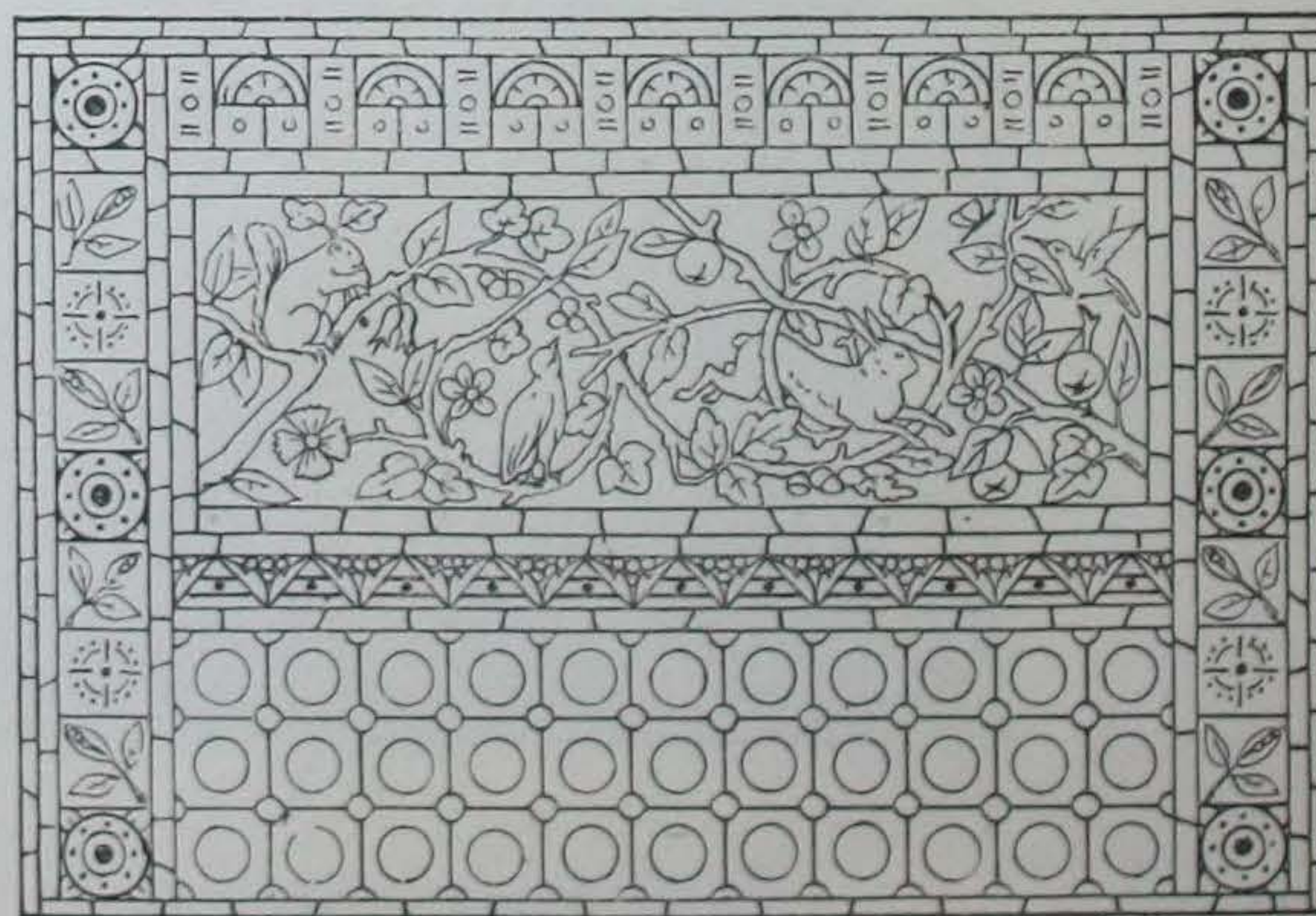
Small subjects are most effectively painted in water-colors, as a finish and delicacy are attainable impossible in the use of varnish-colors.

The outline should be made with a pen charged with liquid color, containing a small portion of oxgall, and should be varnished with thin mastic varnish before any attempt is made to work upon it. The colors being placed upon the palette, and diluted with water, we proceed in the same manner as in painting varnish-colors. These colors dry rapidly, but it is necessary between each layer of color to give the glass or that portion of it which has been worked upon, a slight coating with varnish, to prevent the second color wiping off or rubbing up the first; for this purpose it is desirable to use the enamel varnish made expressly for glass-painting.



MUSIC-ROOM PAINTED WINDOWS.

Admirers of the dainty vessels produced in glass, will be glad to learn that the art of manufacturing these is advancing step by step. For example, the art of embedding gems and gold in glass, practiced by the Romans and long mourned as lost, has been revived. A



STAINED GLASS HALF-WINDOW.

sary: be careful not to rub up the black in the coloring, as it is liable to smear if much worked over. On this account moist ivory-black is frequently, and with advantage, substituted for putting in the outline. It may be used with a pen most conveniently, fine or coarse at the points, according to the nature of the work. When finished, the painting should be fixed up in the window with the unpainted side outwards.

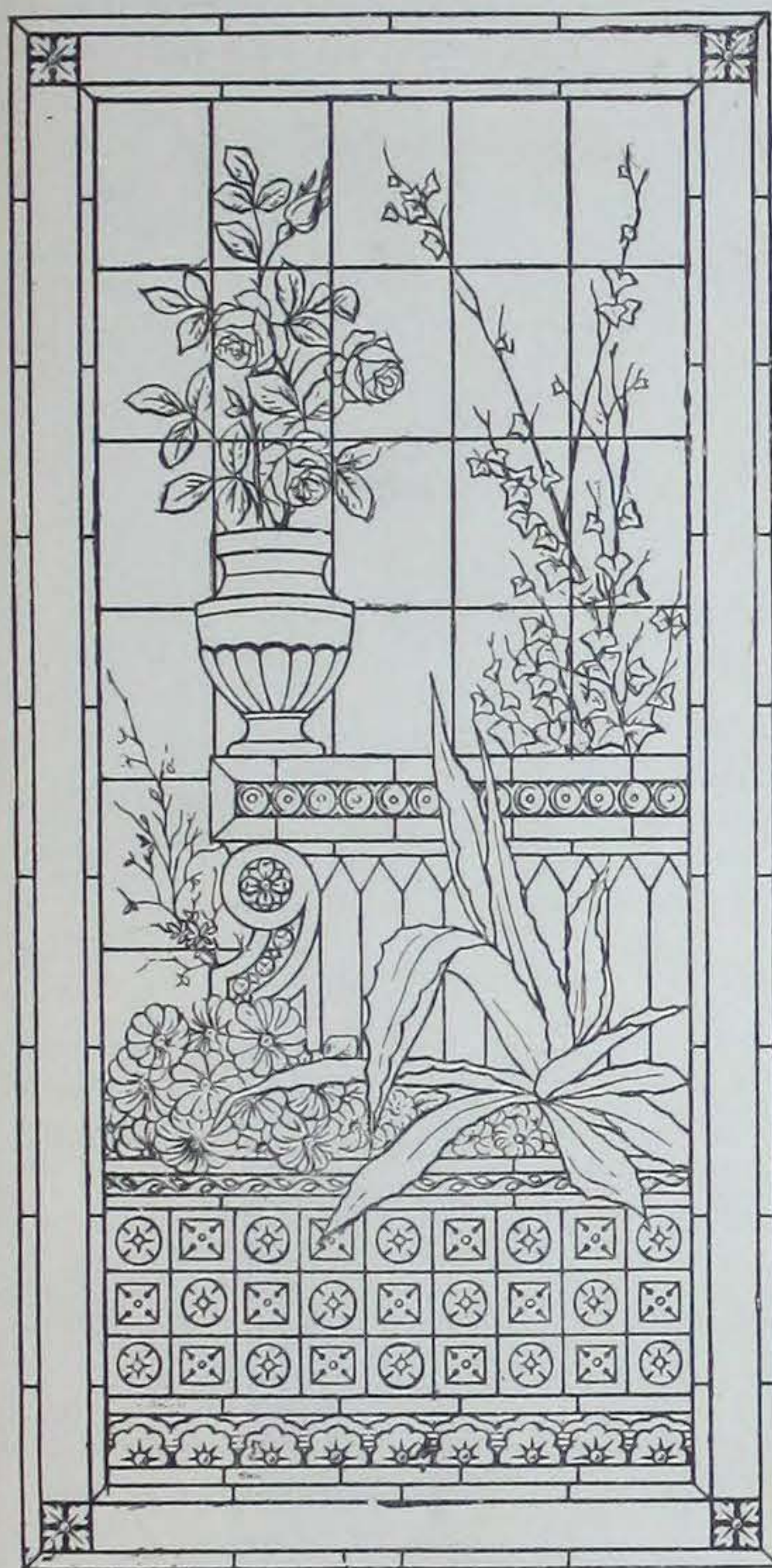
A few hints as to mixing the colors may be useful. The nearest approximation to scarlet is made by the admixture of gamboge with rose madder, crimson lake, or carmine; for greens, verdigris is very brilliant, and almost every shade may be made by adding yellow lake or brown pink in different proportions. When a flat, even tint is required, the camel's-hair brush is used, and a dabber (made by simply covering a little cotton wool with fine leather), which is particularly useful for backgrounds in figure subjects and skies and landscapes, and this applies also to the use of water-colors. When the painting is finished it must be varnished.

Painting glass transparently in water-colors is decidedly the best method for magic-lantern slides. Plain clear glass should always be used, except for windows, when ground glass may be substituted with advantage. The glass should be washed over with a piece of rag and a little gall; this removes any greasiness there may be upon it. The colors are manufactured expressly for the work.

short time ago, a French gentleman, M. d'Humy, re-invented the process, by means of which, among other things, he is able to divide silver and gold in a minute form, for the beautification of glass vessels. He effects this by blowing a piece of glass in a cylindrical or other shaped mould, the latter being heated to a high temperature, and the glass article itself left open at its upper part. The operation is repeated in a mould of smaller diameter, and the smaller article is covered either wholly or partially with leaf gold or metallic powder, which must, however, in either case be thin enough to become broken up or

divided by the expansion of the glass. The smaller cylinder is next introduced into the first, and then more molten "metal" is blown into the former, so that the three layers become amalgamated, the gold or silver being between. The finishing processes subsequently employed are those ordinarily in use. The procedure varies more or less if it is intended to produce regular designs, or to introduce monograms in solid metal, but the above is for all practical purposes the method generally followed to effect the fusion of gold or silver with glass.

The effects obtained by these layers of gold—whether solid, granulated, or mottled—are in some cases extremely pleasing, the decorative appearance of the glass being much



STAINED-GLASS WINDOWS.

enhanced by what is actually a substratum of gold, silver, or platinum. In the ruby-tinted, green and other colored glasses an exceptional brilliancy is thus obtained. The articles consist principally of smelling-bottles, table-glass, candlesticks, and a few minor pieces of a decorative character.

As glass stained or otherwise ornamented in colors, is now within the means of most persons who read this book, we hope that its use in the many ways suggested, will be pro-



SUGGESTIONS FOR LESSENING THE DISCOMFORTS OF TILED PICTURE-FRAMES.

moted by our publication. To add that form and colors treated in glass, should be selected with due regard to harmony in the matters of symmetry and colors in the arrangement of the rooms which they are intended to beautify, is, we trust, quite unnecessary.

CHAPTER XI.

HOW TO HANG PICTURES.

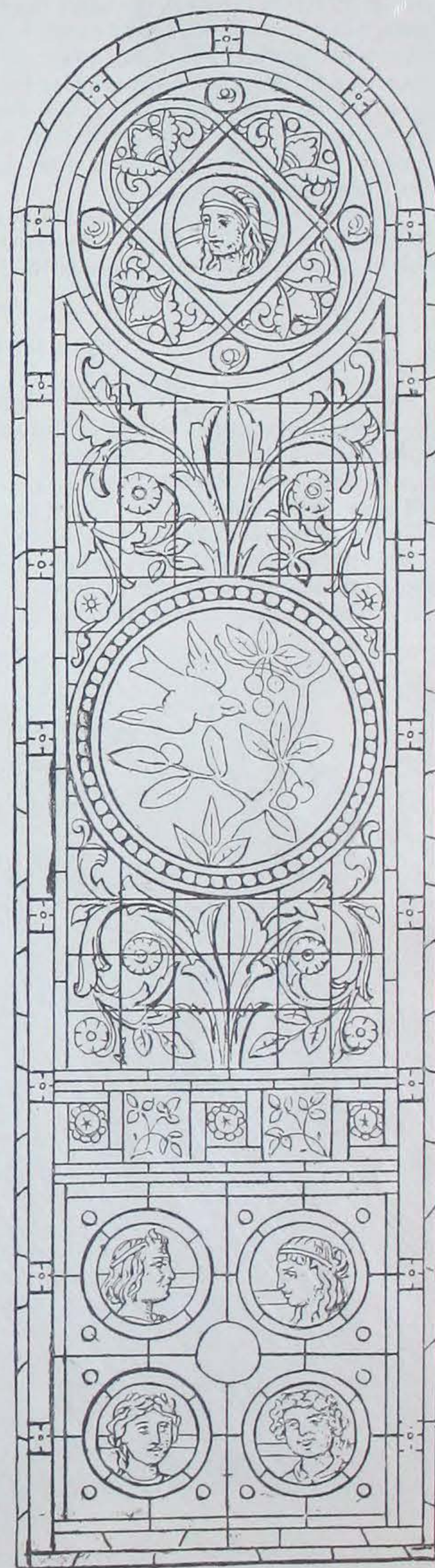
The arrangement of pictures symmetrically so as to produce a sort of uniformity in size and disposition is always pleasing, as is all true symmetry. In a small room the eye takes in the whole of the picture at a glance and rests with content upon such a disposition of parts. On the other hand, if the pictures are of all sizes and hung without any regard to this principle, they look incongruous and anyhow, as if they were not worth the trouble of arranging properly. It is not always that our stock of pictures will be sufficiently near in size to enable us to distribute them equally. Still, if they are judiciously arranged, we may do away with the objection in a great measure. If it is engravings alone we have to hang, it is an easy matter to get them in pairs of a uniform size. With a mixture of oil paintings and engravings this cannot well be done, but with care and good taste even these may be so arranged that they will not clash with one another.

The practice of hanging pictures so that they shall project forward at their tops is a question of position as to light. When the light falls full upon a picture, whether a varnished oil painting or a framed engraving or water-color, there is a glare or brightness which prevents the whole of the picture from being seen. This is a common case, and the only means of avoiding it is to let the picture hang out from the top so that we can see the whole of it from any part of the room without this objectionable light upon its surface. This is effected by placing the rings of the frame low enough down to cause the picture to have the desired inclination. It is a good plan, when about hanging a room with pictures, to make a sketch of the proposed arrangement previous to commencing hanging. This saves much after-labor and vexation. The largest picture should always have a central position, so that those of a less size and form can be symmetrically grouped around it. The eye will be satisfied by such an arrangement. The character and form of the frames is a very important factor in the question. Engravings and water-color paintings should always have a broad margin to the mount and a narrow light frame. The margin serves to isolate the painting or engraving, and thus enables us to see its beauties to much greater advantage. This is more especially the case if the wall upon which they are hung has a pattern upon it. These frames should be alike in make and breadth as far as possible.

Oil paintings require a different and much heavier frame than water-colors and engravings. The principal object in both cases is to display the painting to the best advantage. The broad margin does this with water-colors, but the oil painting having no plain margin we must depend upon the frame to effect its isolation. In our opinion a great mistake is made in having these frames too elaborately ornamented. It is not the frame we want to exhibit but the picture, therefore anything tending to lead the eye from that is an error. The frame surrounding an oil painting should be broad and comparatively plain, as we thus separate and confine the picture so that the eye takes in the whole of it, without being confused or interfered with by any external object.

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Strong wire, cord or line, both "gold" and "silver," is now made, of different thicknesses, for hanging pictures, and is admirably adapted for the purpose, being very thin but capable of bearing great weights. All picture-cords of whatever kind should be as near the



STAINED-GLASS VESTIBULE DOOR.

color of the wall upon which they are put as possible, in order to cause them to be but little seen. Too many cords are always objectionable. It is better to hang the picture with straight cords, that is to loop the cord on to two hooks so that it shall be perpendicular at each side of the picture, and not looped on to a single hook or nail. When one picture is hung beneath another the bottom one should be hung from the one above and not from the top; we thus avoid multiplying the cords, which is always objectionable. Pictures may also be hung without any cords showing by crossing the cord through the rings at the back of the picture, and looping this into a nail or hook; neither cord or hook will then be seen. When picture mouldings are not fixed, strong nails may be used having earthenware, china, or brass heads on them. These screw on to the head of the nail, so that the nail may be knocked into its place and the head screwed on afterward. These are very neat and have a good appearance, and always clean up well.

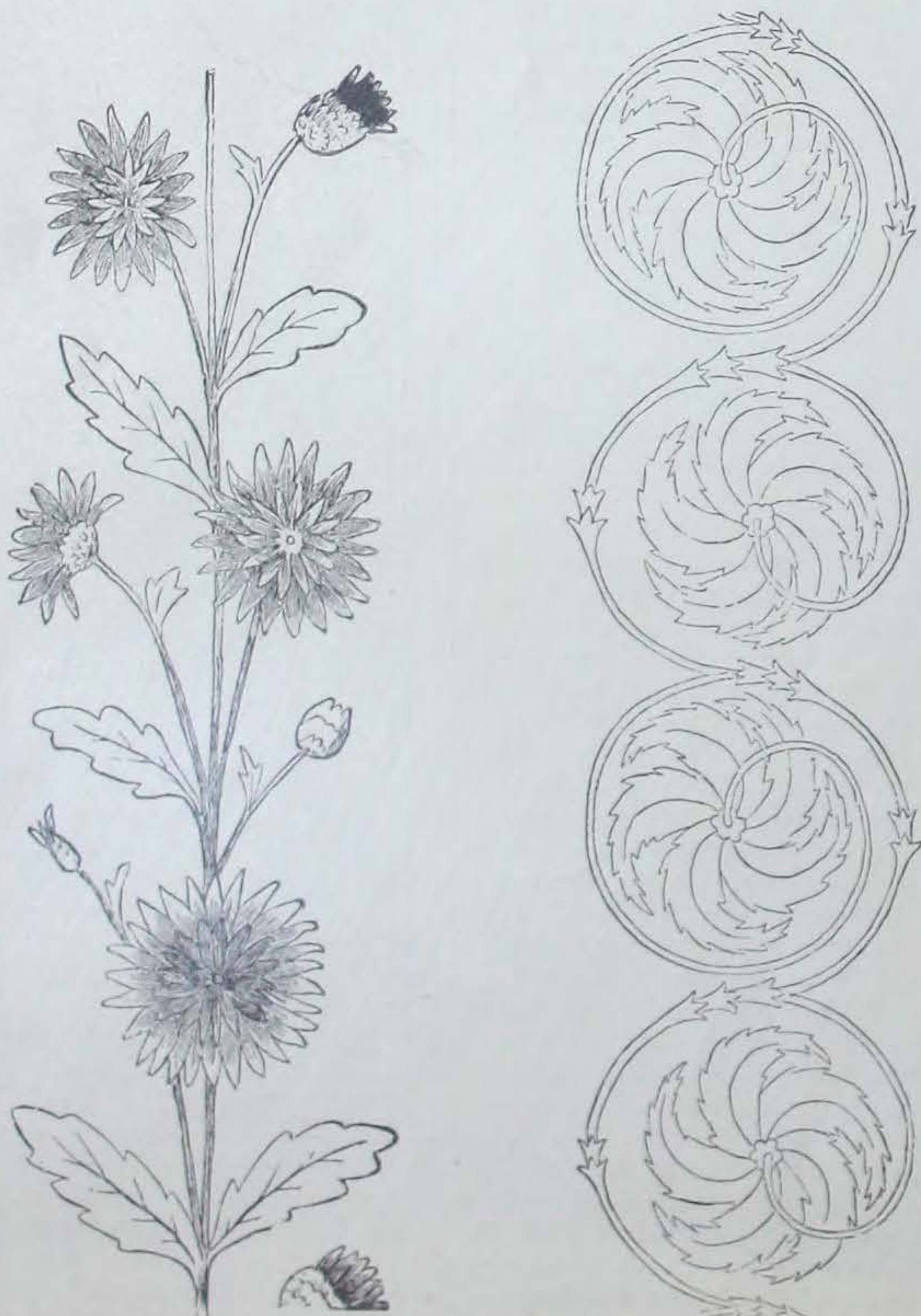
Pictures of all kinds should be kept free from dust at the back, for where this accumulates injury is sure to result. To effect this two pieces of cork at the bottom edge of the frame, will keep the frame from the wall, relieve the pressure, and allow the dust to a great degree to fall down and be cleared away. Gold frames should never be dusted with anything but a feather brush, and when they become dirty, servants or inexperienced persons should not be allowed to attempt to clean them, as they will be sure to spoil them. In cleaning the glass of water-color paintings, and engravings, the greatest care should be used to avoid rubbing the frames. They never should be wetted with the sponge or leather, or they will soon be spoiled.

While on the subject of the hanging of pictures we introduce a scheme for lessening the unsightliness of tilted frames. Its convenience, practicability and effectiveness, appear without the necessity of farther description than that suggested in the illustration itself.

CHAPTER XII.

NEEDLEWORK IN DECORATION.

This is emphatically a chapter for women, who will find it replete with information of a practical sort. There will be a great gain to your house in individuality if you arrange your own needlework for it. The carpets, wall-papers, furniture, and probably the pictures and other art ornaments, are the product of other people's minds. It can scarcely be otherwise, but it is much more easy that the embroidery should be the product of your own thought; it will then be unique, and give an air of originality that can never be attained through the intelligence of others. Being unique, the work is, in its degree, priceless, and it is a standing protest against the power of mere wealth, seeing that it is enriched, not by



CHRYSANTHEMUM BORDER.

OLD ENGLISH BORDER.

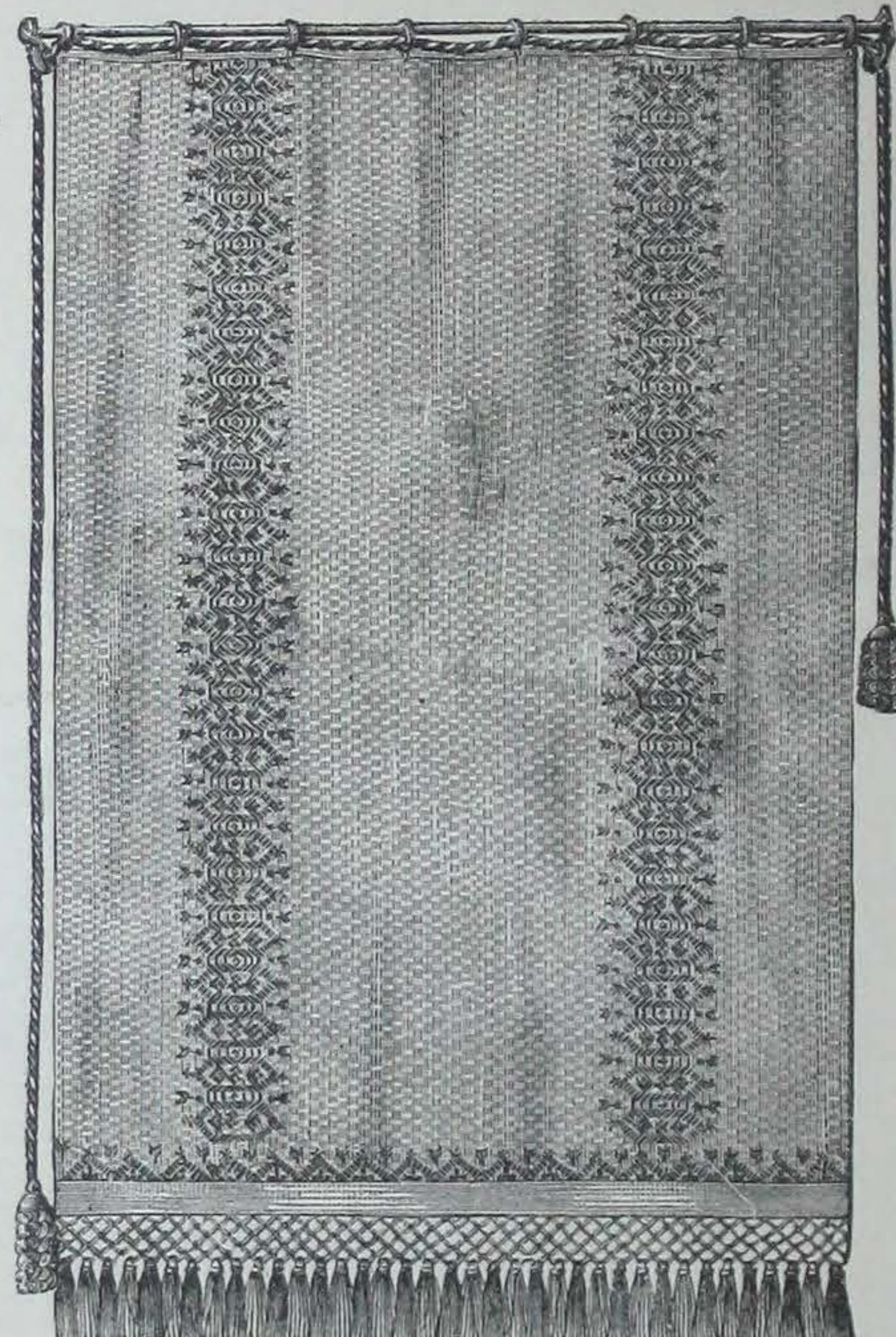
silk and gold and other men's toil, but by the power of art and your own expenditure of time and thought. It is, if you have contrived it honestly and by your own lights, a true product of your own taste and culture, and it will last to be a monument of the things that in your time were loved and sought after, when you have gone to look on those beauties that as yet eye hath not seen, and of which the fair things of earth are but foreshadowings.

The use of embroidery in the decoration of home is time-honored and elegant, and

destined to a wider application with the progress of prosperity and the higher culture of woman. Its capabilities in the way of artistic expression are, moreover, so very decided, and it presents such variety in the use of materials, colors and designs, eligible in the creation of objects of lasting beauty, that every aid to its practice is eagerly sought by deft and graceful beauties everywhere.

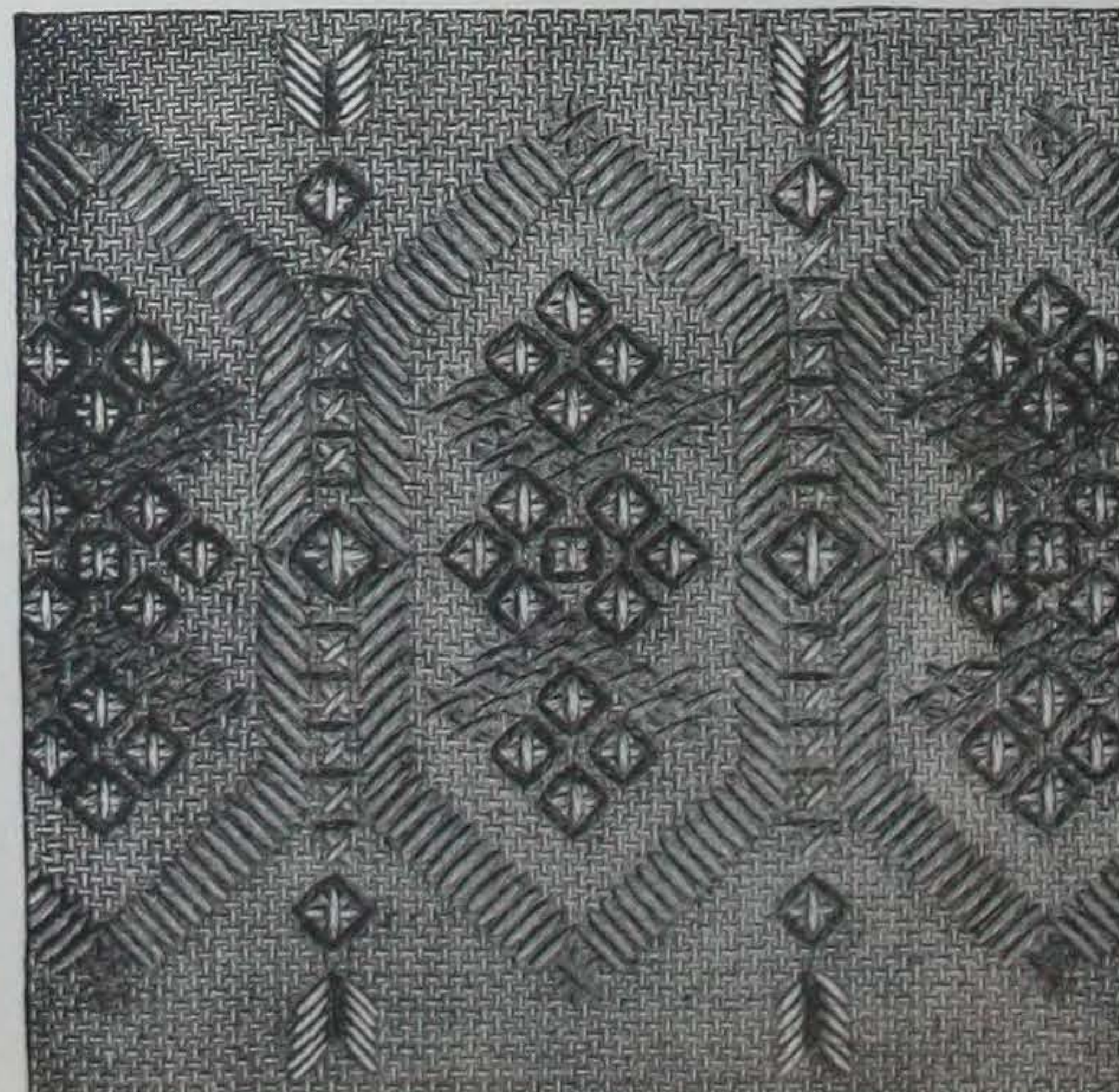
To instruct the fair reader in the practice of embroidery is outside of our intention, and would be a presumption, but she will thank us for directing her attention to a source of charming designs.

There is no kind of old English needlework more worthy of study to-day, than that of the eighteenth century. The curtains and hangings of Queen Anne's time are of excellent design, grave, and well-considered. Here is no more quaintness, no striving after the im-



WINDOW SHADE EMBROIDERY.

possible, nor touching imperfection, rousing our sympathy for the eager and fanciful workwoman of the earlier time. All is polished, capable, well-regulated, the color entirely within bounds, the forms full of a courtly rather than a natural grace. The flowers are not those of the forest and wild hedge-row, but of grave parterres and stately Dutch gardens—



DETAIL OF WINDOW-SHADE.

noble sunflowers curling their leaves within due bounds, tulips standing upright on sufficient stems, stiff crown imperials and broad lilies, all marshalled in well-balanced order and thoughtful arrangement. For large pieces of work, such as coverlets and curtains, there cannot be better models than these, always having regard to the intended surroundings of our own work.

Lighter and more delicate fancies succeed these stately performances; the patterns

grow smaller, the materials finer, the uses more intimate and personal. Trailing patterns of honeysuckle, jasmine, and sweet pea, cover the finer linen in graceful trellis, or are scattered over creamy satin in dainty bouquets and sprigs, of which the best chintz patterns

be as intelligent students, not as servile copyists—not accepting as good everything of that date, for it is beauty, not curious antiquity, that we seek. It is because the work of this time is thoughtful and original that it is worthy of our earnest attention; but in blind admiration we are apt to miss these essential charms. It is well to remember the reason why English art-work of this period is so good: it is because there was then so little pacific intercourse with the French, from whom the English have always been too prone to copy. The British workmen were thrown upon their own resources, and, consequently, there is in all the household and decorative work of this age something more truly national and more original than at any subsequent period.

A question of importance to the embroiderer often is, how to transfer old embroideries on to a new ground. This is usually done by appliqué. In transferring old needlework, it



FIGURE 1.—WINDOW DRAPERY WITH ORNAMENTAL STRIP IN APPLIQUÉ ON VELVET, EMBROIDERED FROM A DESIGN IN THE CLUNY MUSEUM.

are imitations. Delicate satin-stitch work is done on net—almost worthy of being ranked as lace; and embroidery on white muslin is brought to a rare perfection. Silk is dyed in more tender shades; velvet becomes too heavy for the prevailing taste, and goes much out

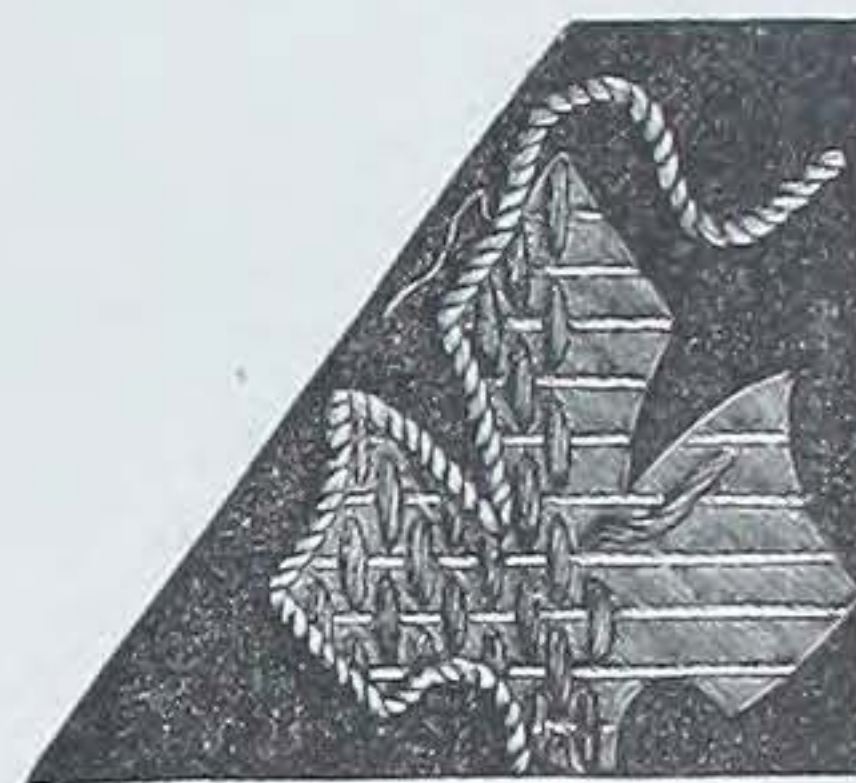


FIGURE 3.—DETAIL SHOWING HOW TO MAKE AND BIND THE FLOWERS IN THE WINDOW DRAPERY STRIP.

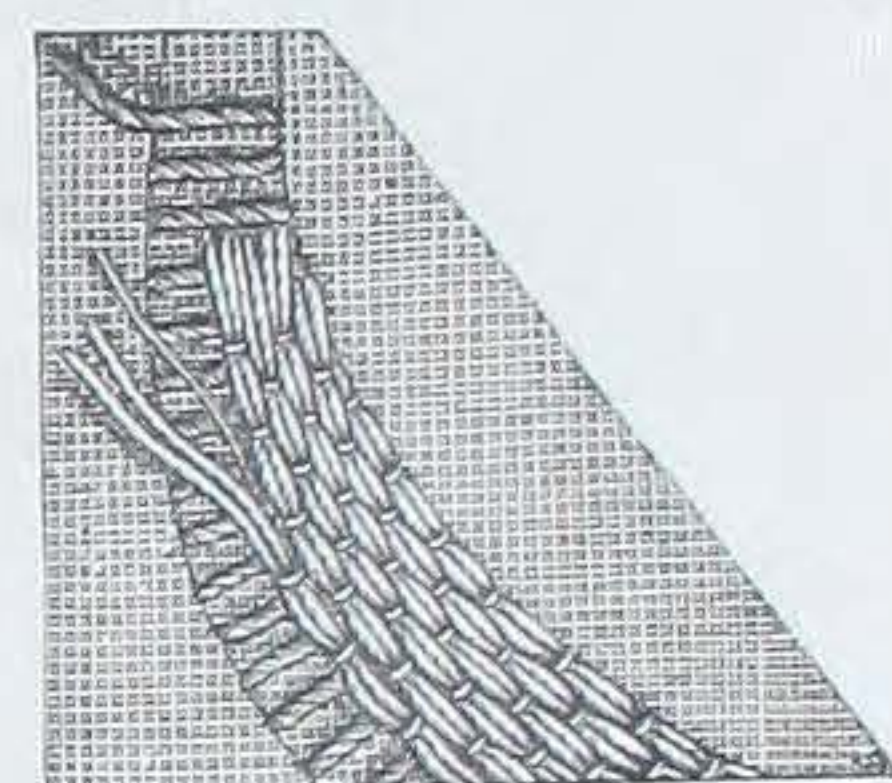


FIGURE 4.—DETAIL SHOWING THE STITCH IN SILK AND GOLD THREAD ON THE WINDOW DRAPERY STRIP.

is necessary to cut away the ground close to the edge of the embroidery. It is then placed on the new material, which has been previously framed, and the outline tacked down. The best way of finishing is then to work in the edges with silks dyed exactly to match the colors in the old work. If properly done, it is impossible to discover which are old and which new stitches, and except by examining the back, that the work has been transferred at all. The words "dyed to match" are used advisedly, as it is impossible otherwise to procure new silks which will correspond with the old. Embroidery transferred in this manner is as good as it was in its first days, and in many cases is much better, for time often has the same mellowing and beautifying effect in embroideries as in paintings. A less expensive, but also a much less charming, method is to edge the old embroidery after



FIGURE 2.—FULL-SIZED ORNAMENTAL STRIP IN APPLIQUÉ ON VELVET, FOR WINDOW DRAPERY.

of fashion; crewels are less used, and silks more so; while the linen becomes cambric, and satin—the most beautiful material of all—is most frequently used for a ground.

We can hardly study the needlework of the eighteenth century too much; but it must

applying it to the new ground with a cord or line of couching. With this treatment it is, however, always easy to perceive that the work has been transferred. For almost all kinds of appliqué it is necessary to back the material; and it is done in this manner: A piece of

thin cotton or linen fabric is stretched tightly on to a board with tacks or drawing-pins. It is then covered smoothly, and completely, with paste. The wrong side of the velvet, satin, serge, or whatever is to be used in the work, is then pressed firmly down on the pasted surface with the hands, and then left to dry.

Of the simple and suggestive designs of which we give cuts on page 20, the chrysanthemum border is especially useful for silk embroidery. The old English border is taken from the hangings of an old English bedroom, in which the beautiful circular flower pattern is formed into circles, diamonds or borders for the centres and edges of the coverlet, bed-head, valances, bed and window curtains and a hanging for the toilet table, all worked in deep lilac silk on white twill.

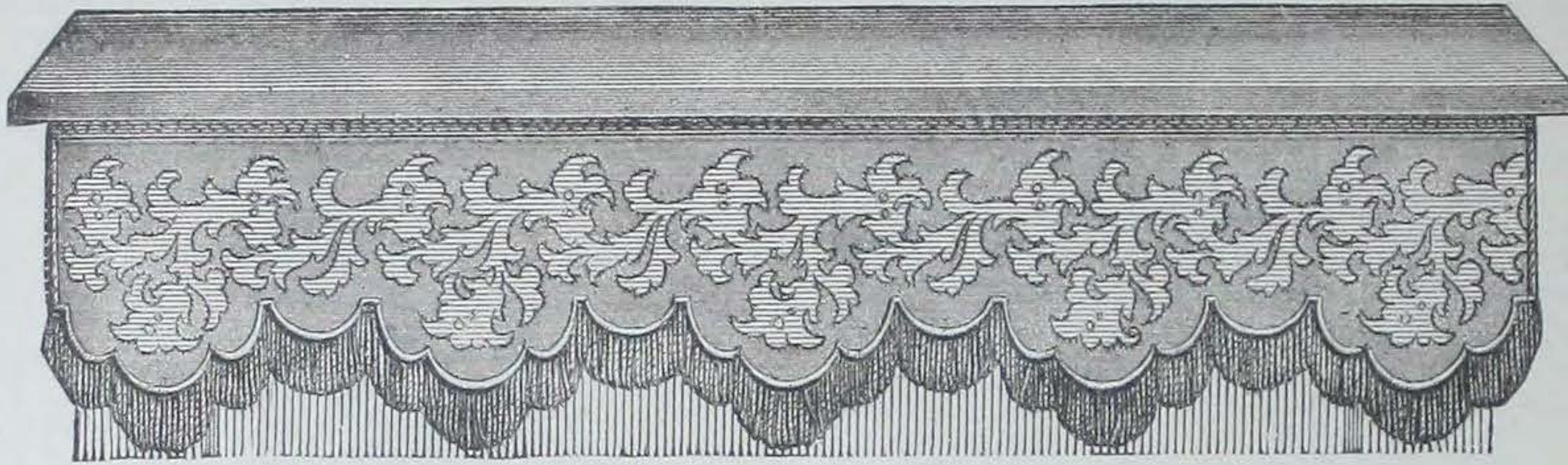
An elegant employment of embroidery is presented in the pictures of window-shades, to be found on page 20. The model is *écru* canvas cloth, treated as shown in the cut exhibiting the detail of the design. Of course, the colors should be selected with the view to harmony in the room. It may, however, be well to state that this window-shade has been successfully carried out in violet, green and pale blue wools, the model lined with dark green silk.

Such window drapery as that illustrated on page 21, marked from figures 1 to 4 inclusive, is not only adapted for windows which reach down to the floor, but for those of the ordinary sort. The model of the design is in the Museum of the Hotel de Cluny, and is made of ocean blue silk reps, ornamented with a strip of garnet velvet with appliqué embroidery. The various antique embroidery are carried out in a very original manner in Algerian silk and gold cording. The darning stitch of the separate figures, the silk reps appliqués and the embroidered appliqués, which are first embroidered separately and then applied, stand out in relief, and imitate the richest damassé stuff. The embroidered appli-

the linen embroidery, the pieces are slightly moistened with gluten, and while still damp cut out and pasted on the velvet, and then bound with gold cord, which is sewed down with gold-colored silk.

Fig. 2 shows that the border ribbon is made in the same way, except that here four threads are used instead of two. All these darning designs are made of rose-colored sadder's silk. The flowers are of salmon-colored silk reps, and their interior embroidery consists of gold thread and peacock and olive-green Algerian silks.

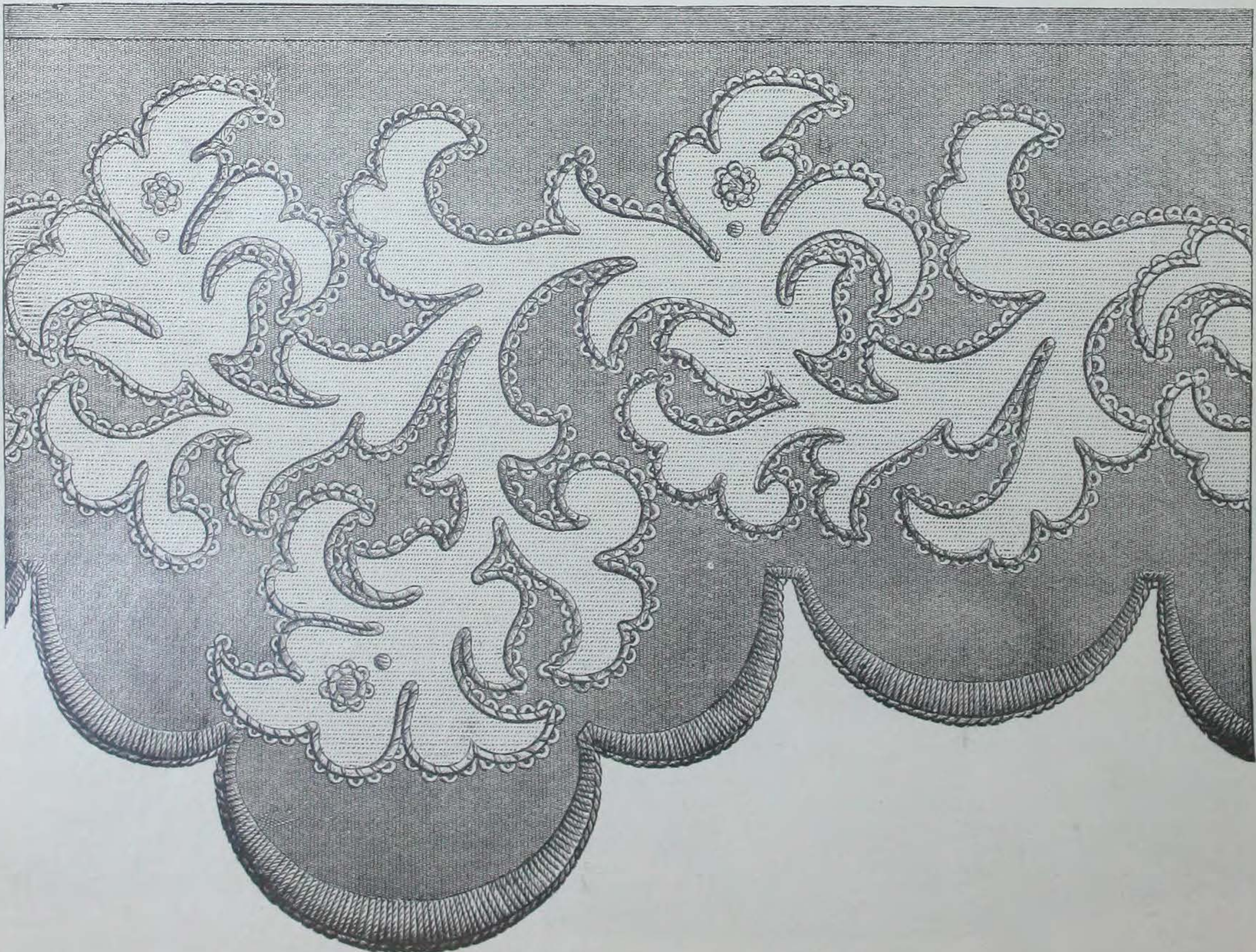
Fig. 3 shows how the gold thread must be stretched across, and the silk worked in and over the bars. All the figures are bound with gold cording, and the veinings all worked with gold thread. The curtain is lined with blue sateen, and the width of the materials used on each side of the velvet band depends upon the width of the window. For very wide windows two bands of velvet may be used. The model represented is 39 inches wide, 27 inches deep, and



DESIGN FOR CHIMNEY-BOARD VALANCE.

has a fringe $4\frac{1}{2}$ inches deep. It is edged on three sides with a cord matching the blue and garnet. At both upper corners and on the upper centre there are loops by which it can be fastened to round porcelain knobs screwed to the window frame. The silk brocade and velvet for the curtain may be ordered from any dealer in fine upholstery goods; if less costly material is desired, woolen damask, or even heavily-lined cretonne may be substituted.

In making piano-fronts to replace the fretwork in upright instruments, the color of the ground should harmonize with the color of the wood, and the design should be carefully adapted to the space it is to occupy, the rigid boundary of the framework making this especially important in this case. A great characteristic of good design is this careful proportioning of the ornament to the place it is to occupy, and regarding of the lines that are



FULL-SIZE WORKING PATTERN OF THE CHIMNEY-BOARD VALANCE.

qués are worked on linen and in a frame, as indeed all the rest must be, in order to keep the pieces perfectly smooth. The interior of the outlines must be filled, as indicated by Fig. 4, with fine Moravian cotton, which is carried backward and forward over the linen, not underneath, so as to form little supports for the double gold and silk threads, which are to fill the intervals in opposite direction. These silk and gold threads are held in place by very fine silk stitches, which are always placed between the bars. After finishing

to confine it. If you study any known good design, you will notice how this is done, often very unobtrusively, sometimes with much knowledge and skill, sometimes quite unconsciously: a leaf is pushed out toward a corner, or a spray is bent down from a line, not violently stopped or cut off, but first acknowledging the needful limits. The piano-front should be in fine materials, fine linen, silk or satin. Velvet is too heavy and would deaden the sound, and for the same reason embroidery of a light character is better for the

purpose than applied work. The piano-front of the illustration is made of gold-colored soft silk. The shell-like petals of the flowers are all worked in blue silk, pale at the edge, white in the middle and the vein markings in very dark blue. The leaves are for the most part worked in a soft gray-green, excepting here and there where a bronze shade is introduced. The leaf stalks and veinings are of the same bronze-green. The scroll stem is done in two shades of bronze, the lighter one being also used for the calyx of some of the flowers. There is no border worked to this design, the framework of the piano itself being sufficient for it.

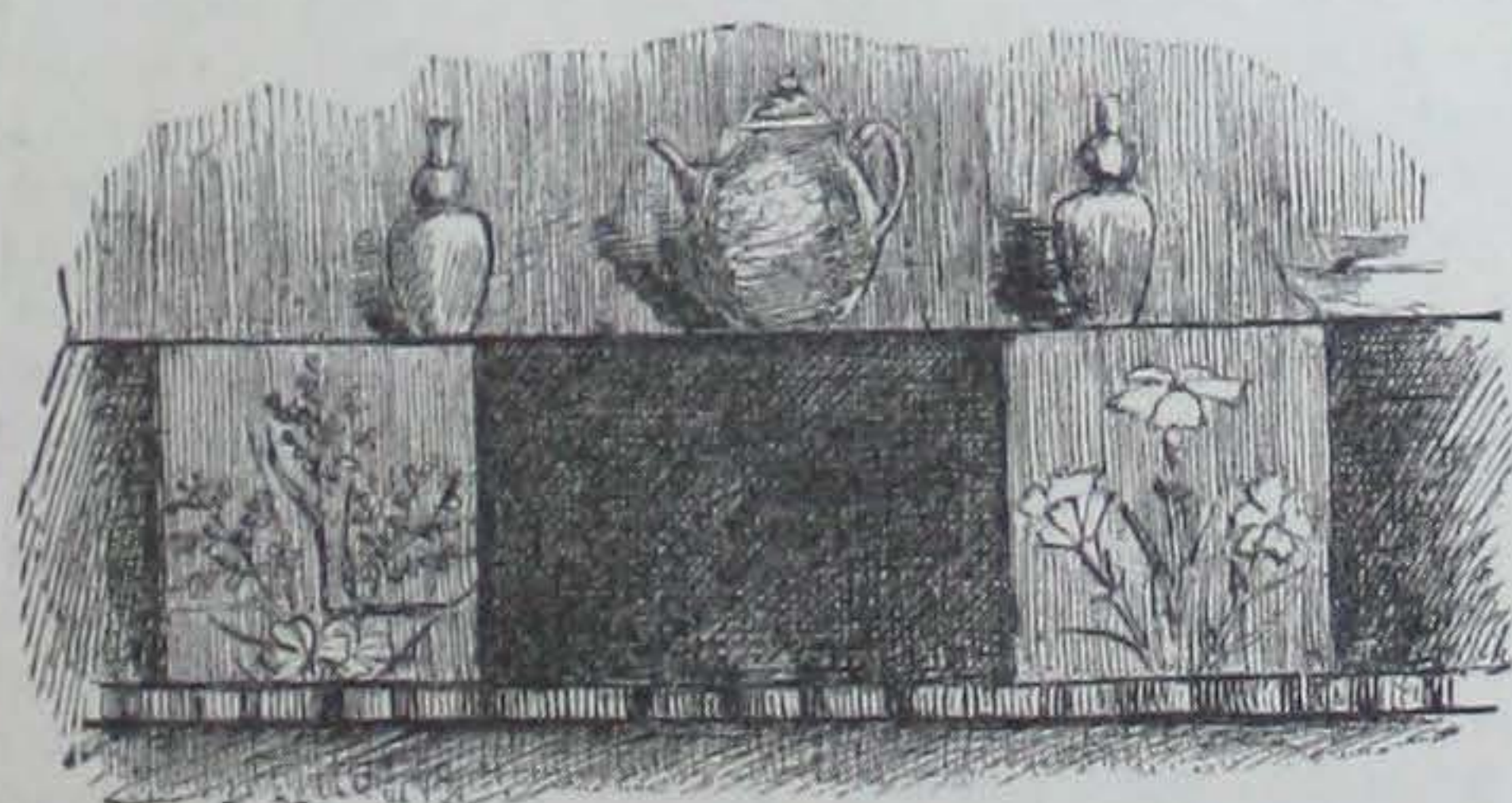
Silk stuffs with a pattern woven into them, used for piano-fronts, give a diapered richness of effect, and thus help a pattern that on a plain ground would look rather poor,

and they often answer when a worked diaper would be too heavy or too laborious. Little patterns in lines and diamonds are better than flowered patterns, though these may be used with good effect, after the style of some French brocades and of some kinds of China, where a little ornament of the color of the ground underlies the colored ornament, giving to it a kind of soft echo. A remarkably pretty piano-front is done on bronze-green satin, the design being sprays of convolvulus springing from a gray satin vase in the centre. The flowers are worked in blue and white, the leaves in various shades of green. To relieve the whole, three or four sulphur-colored butterflies are introduced, hovering over the flowers; the whole is inclosed in a very simple border of green and blue.

Frieze-like processions and arrangements of figures suit a piano well, especially if they have some reference to music; and though figures in needlework are rarely successful, some people have a special talent for their production in this way. They should be very well and accurately done; outline, with a few expressive lines for the detail, or shading, is the style most likely to look well. A judicious arrangement of singing-birds would be more within the compass of the ordinary worker; not that we are averse to great efforts, or to new or original applications of needlework, but the applications must be suitable to the means at command, and the great efforts should be rightly directed.

As regards mantel-hangings, when the chimney-piece is itself a work of art in marble or wood, it is better without any hangings at all; but when it is ugly, mean, or pretentious, of gloomy black, chilly white, or unsympathetic gray marble, or of uninteresting stone, it is greatly improved by a hanging, which may be made very pleasant to the eye by well-arranged embroidery.

The ground color of the hanging should be neither light nor dark. Middle tints are unfortunately much neglected in ordinary decoration, whence the obtrusive and worrying effect of much modern needlework, done with crewels, but not with art. In an object at which we look constantly in moments of repose, a gentle gradation of tone and quiet harmony of color have a far more restful effect than cutting contrasts. Moreover, the needed repose is better secured, by a repeated and conventional pattern, which is understood at once, than by the exciting variety of, say, a wreath of various flowers so naturally treated that every one is different, and requires a special effort of the mind to comprehend it. If the chimney-piece be a long one, it is better to have a centre to the pattern with the ornament running each way; if, on the contrary, an appearance of greater width be desired, the pattern should be continuous. The hanging should not be too deep, and the width of the pattern should be proportioned to it. Fringes, cords, and braids for finishing should



MANTEL-HANGING.

be used very sparingly. An edge of deep button-hole stitches in one or more of the silks used for the work, will often make a good and sufficient edge. If two or more silks are used, work the first color in stitches rather wide apart, and then place between them the stitches of another color or shade. It is better to let the drapery hang like a table-cloth at the corners, than to have it fitted round the shelf. Often it is better still to make it just the length of the shelf, so that it hangs down in front only. If the ends of the chimney-piece project far into the room or are much seen, they must be covered. If the hanging be fitted round the shelf, and the pattern chosen be one that has a centre, the ends of the pattern must not be continued round the corners of the shelf. They should be completed in the length, and a detached spray or group to correspond worked at each end. A running pattern without a centre may be taken all round. Some hangings may be effectively arranged in panels, the ground divided into squares by rows of braid or stitches, and an ornament worked in each; or panels of a lighter shade than the ground laid on, and worked with suitable designs, as shown in the accompanying picture of a mantel-hanging.

Particular attention is called to the design and full-size working pattern of an exceedingly tasteful chimney-board valance. The material is plush and the appliqués are satin,

sewed down at the edges with a narrow fancy silk passementerie. The scallops at the edge are buttonholed and ornamented with fringe to match.

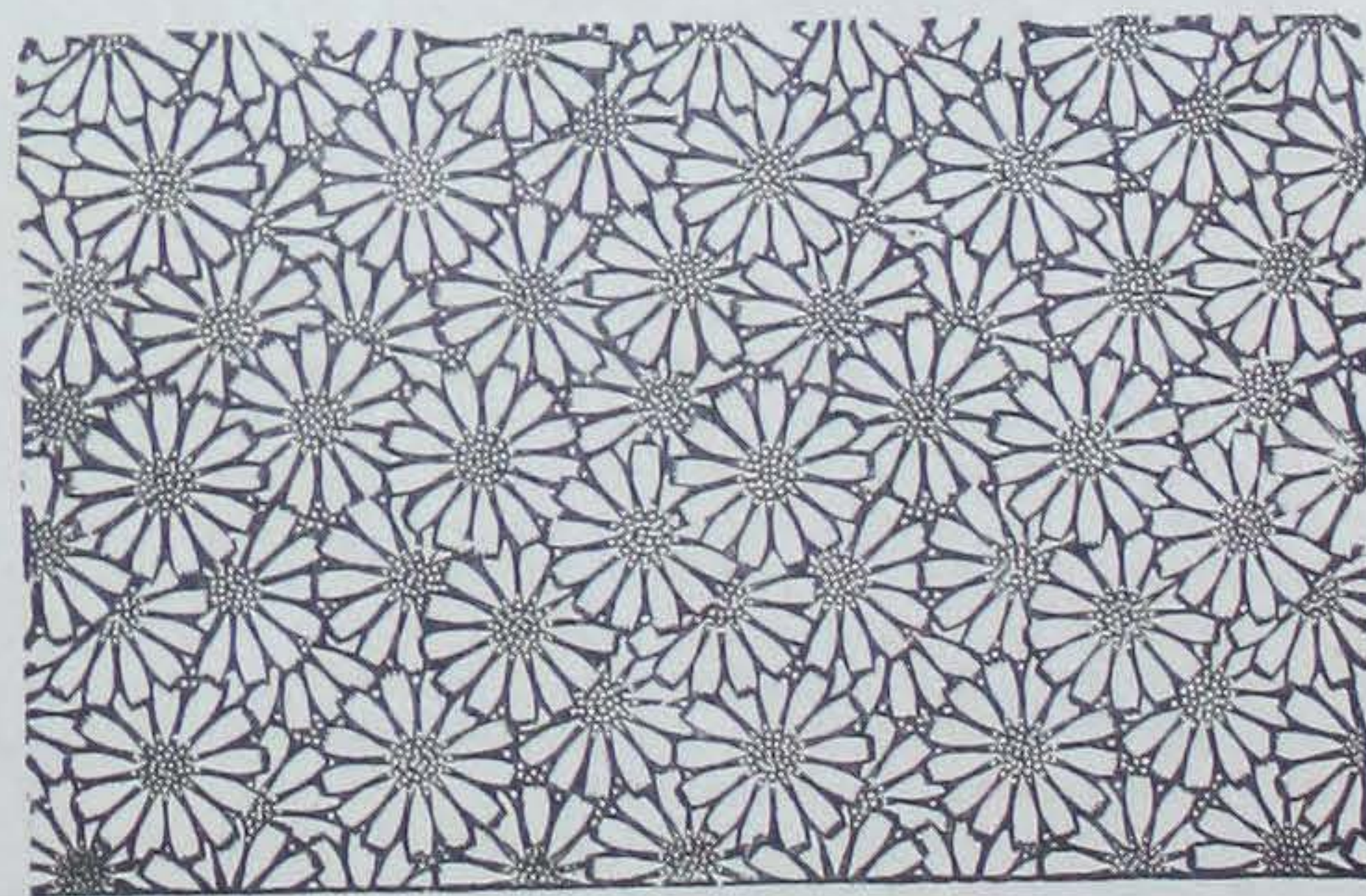
Here we may say that a valance-suspender, recently patented, is an adaptation of the ordinary safety-pin, in several sizes and patterns, for bed or window hangings, and allows of the lifting off of valances, curtains, etc., without unpinning.

The first attention, in the important matters of curtains, portières, and hangings, is to be directed to choice of material, lining, color, and trimming. As to material, the selection depends upon the probable cost, and the appropriation of the hangings; these being either employed to exclude draught or to ornament both windows and doors, not only in apartments but also in staircases, corridors, tents and verandas. Curtains for staircase win-

dows and mirrors on landings are chosen in accordance with the rest of the decoration. In lofty corridors opening out into suites of rooms, curtains are suspended from a pole stretched across the passage way at about three-fourths of its length. The space intervening between it and the nearest door, is convenient for placing out of sight tables, flower-vases, etc., either before or after a dinner-party or ball. Pretty chintz curtains also serve at times to divide off a portion of a bed

or dressing-room, or to conceal a recess, which, furnished with pegs, is thus transformed into a kind of hanging wardrobe. Occasionally double curtains are employed—for instance, lace with velvet and silk, etc., cherry-red satin cloth with top curtains, in reseda-colored woolen material, or Aubusson rep, matching the portière, upon brocade harmonizing with the easy chairs, the latter cut eight inches longer to serve as a border.

Having then settled to which of these uses our curtains are to be applied, the next step will be making a choice between the innumerable stuffs and artistic colors everywhere exhibited. There are velvet, plush, brocade, satin, waste silks, Oriental fabrics, heavy carpet-like textures interwoven with gold thread, damask, and satin cloth, besides serge that drapes so beautifully, reps, moreens, baizes, camel-hair cloths, charity blankets, oatmeal cloth, etc. In lighter textures, cretonnes have almost replaced the old-fashioned glazed chintzes. Those now manufactured show increasingly artistic conceptions. Crash, Bolton and workhouse sheeting look charming, as do also hop-sacking, unbleached linen, twill and Java canvas, without mentioning the numerous kinds of white and colored muslin, lace, and guipure; and the more homely ones in knitting, netting, and crochet. Madras and Cretan muslins win great favor, specially in dwarf curtains. Through their gauze-like texture, the sunlight sheds a soft glow on the Oriental designs, and the effect is really lovely. There are several varieties of this rather costly tissue, including the striped with opaque bars in dull colors, alternating with an equal groundwork space, the fan and the floriated with pattern seemingly darned into the fabric. A similar kind has the scrolls, etc., wrought entirely in white, and the threads, cut on the wrong side, render the surface quite fluffy. Some of the Japanese paper curtains display really good designs, and are often found very useful while moving, or as a temporary substitute for more expensive hangings. Fireplace curtains appear in extremely handsome materials, such as cloth of gold, satin, velvet, brocade, and painted or embroidered Indian muslin. The Oriental style being now so popular, Persian needlework harmonizes perfectly with the quaint chimney-piece decoration, and utilizes to advantage any carefully stored specimens too short for window curtains, yet too entire for scattering about on small cushions and chair seats. With regard to color, we may choose peacock from the deepest to the coldest tint,



DESIGN OF DAISIES.

golden and russet browns, sage greens, dull brick-reds, and in fact all unobtrusive tints, as suitable for every furniture. As a rule, window curtains gently contrast with the wall paper; and portières, though not necessarily of similar material or design, must be in accordance with both. In patterns, running sprays are preferable to the flat heaviness of scroll figures. Designs traversing an entire surface give a better effect than regular bands leaving intermediate spaces of groundwork color. It should also be borne in mind that horizontal stripes give greater breadth, while perpendicular ones add to the apparent height of a low-pitched room.

Cretonnes and mixed fabrics need nothing when woven both sides alike; but such materials as velvet, satin, etc., have generally a backing of foulard, twill, silk, merino, or coburg. To improve the set of heavy textures, an interlining of some woolen substance is occasionally added. The somewhat harsh whiteness of muslins is sometimes relieved by colored tarlatan. This diffuses the light more pleasantly, and is generally considered to set off the furniture. In bed fittings (curtains, pillow cases and quilts, box-plaited wall

thin cotton or linen fabric is stretched tightly on to a board with tacks or drawing-pins. It is then covered smoothly, and completely, with paste. The wrong side of the velvet, satin, serge, or whatever is to be used in the work, is then pressed firmly down on the pasted surface with the hands, and then left to dry.

Of the simple and suggestive designs of which we give cuts on page 20, the chrysanthemum border is especially useful for silk embroidery. The old English border is taken from the hangings of an old English bedroom, in which the beautiful circular flower pattern is formed into circles, diamonds or borders for the centres and edges of the coverlet, bed-head, valances, bed and window curtains and a hanging for the toilet table, all worked in deep lilac silk on white twill.

An elegant employment of embroidery is presented in the pictures of window-shades, to be found on page 20. The model is *écru* canvas cloth, treated as shown in the cut exhibiting the detail of the design. Of course, the colors should be selected with the view to harmony in the room. It may, however, be well to state that this window-shade has been successfully carried out in violet, green and pale blue wools, the model lined with dark green silk.

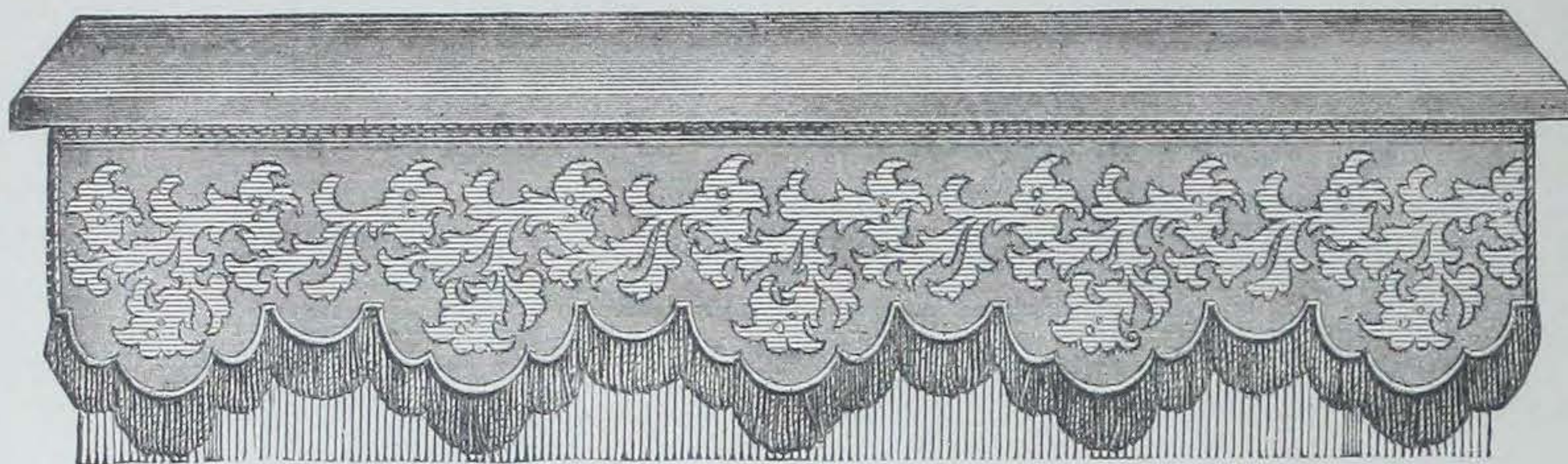
Such window drapery as that illustrated on page 21, marked from figures 1 to 4 inclusive, is not only adapted for windows which reach down to the floor, but for those of the ordinary sort. The model of the design is in the Museum of the Hotel de Cluny, and is made of ocean blue silk reps, ornamented with a strip of garnet velvet with appliqué embroidery. The various antique embroidery are carried out in a very original manner in Algerian silk and gold cording. The darning stitch of the separate figures, the silk reps appliqués and the embroidered appliqués, which are first embroidered separately and then applied, stand out in relief, and imitate the richest damassé stuff. The embroidered appli-

the linen embroidery, the pieces are slightly moistened with gluten, and while still damp cut out and pasted on the velvet, and then bound with gold cord, which is sewed down with gold-colored silk.

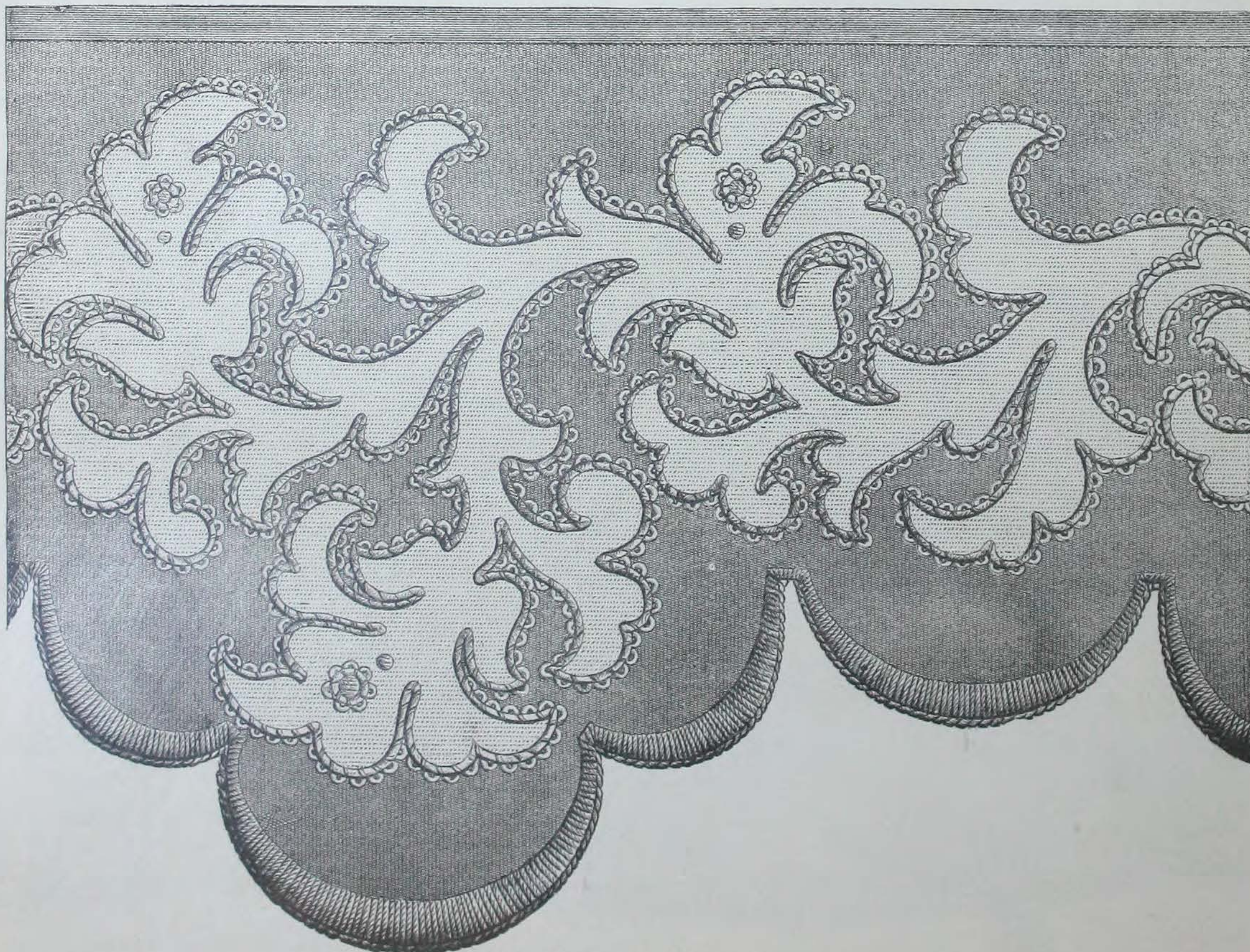
Fig. 2 shows that the border ribbon is made in the same way, except that here four threads are used instead of two. All these darning designs are made of rose-colored sadder's silk. The flowers are of salmon-colored silk reps, and their interior embroidery consists of gold thread and peacock and olive-green Algerian silks. Fig. 3 shows how the gold thread must be stretched across, and the silk worked in and over the bars. All the figures are bound with gold cording, and the veinings all worked with gold thread. The curtain is lined with blue sateen, and the width of the materials used on each side of the velvet band depends upon the width of the window. For very wide windows two bands of velvet may be used. The model represented is 39 inches wide, 27 inches deep, and

has a fringe $4\frac{1}{2}$ inches deep. It is edged on three sides with a cord matching the blue and garnet. At both upper corners and on the upper centre there are loops by which it can be fastened to round porcelain knobs screwed to the window frame. The silk brocade and velvet for the curtain may be ordered from any dealer in fine upholstery goods; if less costly material is desired, woolen damask, or even heavily-lined cretonne may be substituted.

In making piano-fronts to replace the fretwork in upright instruments, the color of the ground should harmonize with the color of the wood, and the design should be carefully adapted to the space it is to occupy, the rigid boundary of the framework making this especially important in this case. A great characteristic of good design is this careful proportioning of the ornament to the place it is to occupy, and regarding of the lines that are



DESIGN FOR CHIMNEY-BOARD VALANCE.



FULL-SIZE WORKING PATTERN OF THE CHIMNEY-BOARD VALANCE.

qués are worked on linen and in a frame, as indeed all the rest must be, in order to keep the pieces perfectly smooth. The interior of the outlines must be filled, as indicated by Fig. 4, with fine Moravian cotton, which is carried backward and forward over the linen, not underneath, so as to form little supports for the double gold and silk threads, which are to fill the intervals in opposite direction. These silk and gold threads are held in place by very fine silk stitches, which are always placed between the bars. After finishing

to confine it. If you study any known good design, you will notice how this is done, often very unobtrusively, sometimes with much knowledge and skill, sometimes quite unconsciously; a leaf is pushed out toward a corner, or a spray is bent down from a line, not violently stopped or cut off, but first acknowledging the needful limits. The piano-front should be in fine materials, fine linen, silk or satin. Velvet is too heavy and would deaden the sound, and for the same reason embroidery of a light character is better for the

purpose than applied work. The piano-front of the illustration is made of gold-colored soft silk. The shell-like petals of the flowers are all worked in blue silk, pale at the edge, white in the middle and the vein markings in very dark blue. The leaves are for the most part worked in a soft gray-green, excepting here and there where a bronze shade is introduced. The leaf stalks and veinings are of the same bronze-green. The scroll stem is done in two shades of bronze, the lighter one being also used for the calyx of some of the flowers. There is no border worked to this design, the framework of the piano itself being sufficient for it.

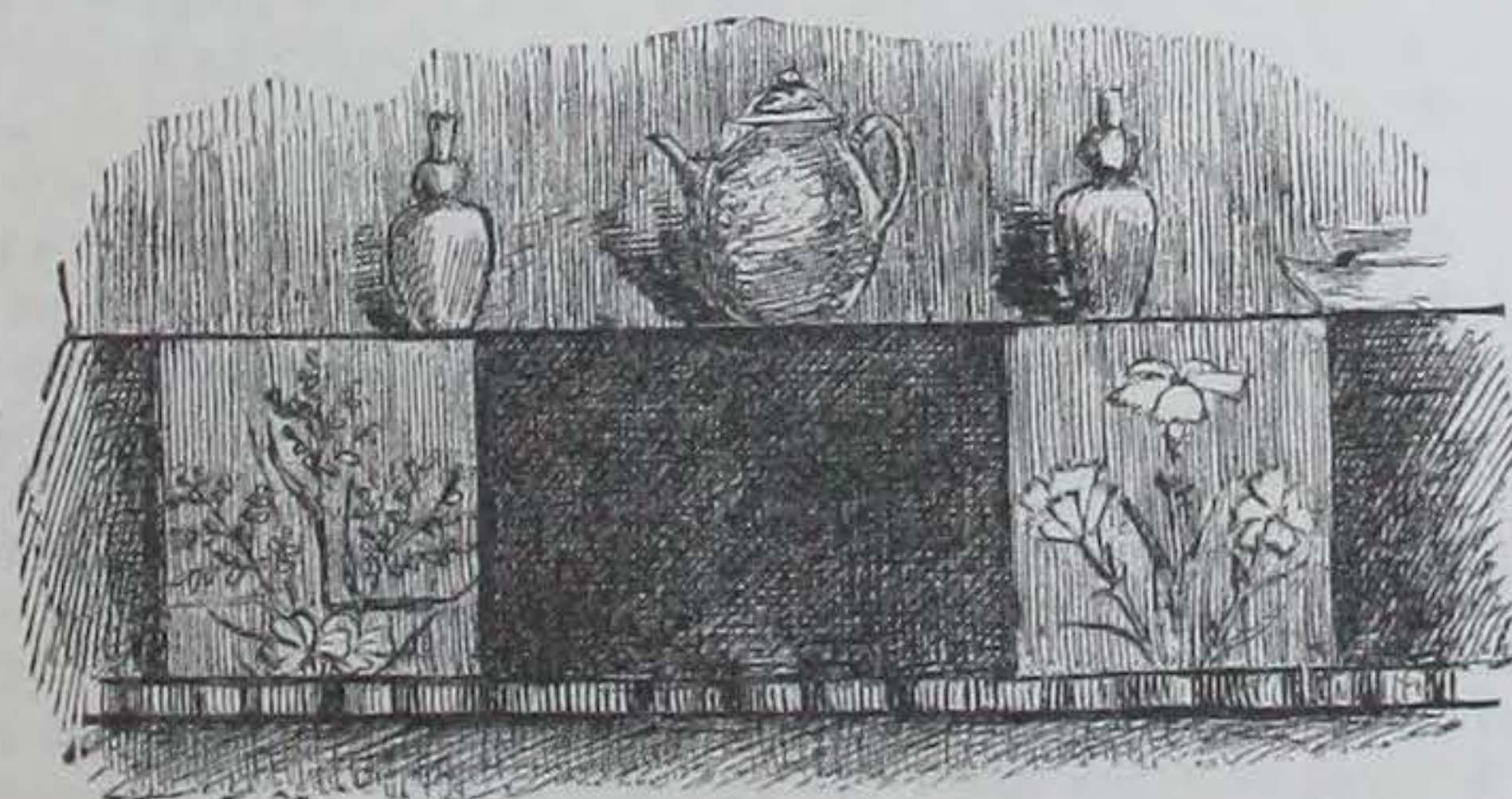
Silk stuffs with a pattern woven into them, used for piano-fronts, give a diapered richness of effect, and thus help a pattern that on a plain ground would look rather poor, and they often answer when a

worked diaper would be too heavy or too laborious. Little patterns in lines and diamonds are better than flowered patterns, though these may be used with good effect, after the style of some French brocades and of some kinds of China, where a little ornament of the color of the ground underlies the colored ornament, giving to it a kind of soft echo. A remarkably pretty piano-front is done on bronze-green satin, the design being sprays of convolvulus springing from a gray satin vase in the centre. The flowers are worked in blue and white, the leaves in various shades of green. To relieve the whole, three or four sulphur-colored butterflies are introduced, hovering over the flowers; the whole is inclosed in a very simple border of green and blue.

Frieze-like processions and arrangements of figures suit a piano well, especially if they have some reference to music; and though figures in needlework are rarely successful, some people have a special talent for their production in this way. They should be very well and accurately done; outline, with a few expressive lines for the detail, or shading, is the style most likely to look well. A judicious arrangement of singing-birds would be more within the compass of the ordinary worker; not that we are averse to great efforts, or to new or original applications of needlework, but the applications must be suitable to the means at command, and the great efforts should be rightly directed.

As regards mantel-hangings, when the chimney-piece is itself a work of art in marble or wood, it is better without any hangings at all; but when it is ugly, mean, or pretentious, of gloomy black, chilly white, or unsympathetic gray marble, or of uninteresting stone, it is greatly improved by a hanging, which may be made very pleasant to the eye by well-arranged embroidery.

The ground color of the hanging should be neither light nor dark. Middle tints are unfortunately much neglected in ordinary decoration, whence the obtrusive and worrying effect of much modern needlework, done with crewels, but not with art. In an object at which we look constantly in moments of repose, a gentle gradation of tone and quiet harmony of color have a far more restful effect than cutting contrasts. Moreover, the needed repose is better secured, by a repeated and conventional pattern, which is understood at once, than by the exciting variety of, say, a wreath of various flowers so naturally treated that every one is different, and requires a special effort of the mind to comprehend it. If the chimney-piece be a long one, it is better to have a centre to the pattern with the ornament running each way; if, on the contrary, an appearance of greater width be desired, the pattern should be continuous. The hanging should not be too deep, and the width of the pattern should be proportioned to it. Fringes, cords, and braids for finishing should



MANTEL-HANGING.

be used very sparingly. An edge of deep button-hole stitches in one or more of the silks used for the work, will often make a good and sufficient edge. If two or more silks are used, work the first color in stitches rather wide apart, and then place between them the stitches of another color or shade. It is better to let the drapery hang like a table-cloth at the corners, than to have it fitted round the shelf. Often it is better still to make it just the length of the shelf, so that it hangs down in front only. If the ends of the chimney-piece project far into the room or are much seen, they must be covered. If the hanging be fitted round the shelf, and the pattern chosen be one that has a centre, the ends of the pattern must not be continued round the corners of the shelf. They should be completed in the length, and a detached spray or group to correspond worked at each end. A running pattern without a centre may be taken all round. Some hangings may be effectively arranged in panels, the ground divided into squares by rows of braid or stitches, and an ornament worked in each; or panels of a lighter shade than the ground laid on, and worked with suitable designs, as shown in the accompanying picture of a mantel-hanging.

Particular attention is called to the design and full-size working pattern of an exceedingly tasteful chimney-board valance. The material is plush and the appliques are satin,

sewed down at the edges with a narrow fancy silk passementerie. The scallops at the edge are buttonholed and ornamented with fringe to match.

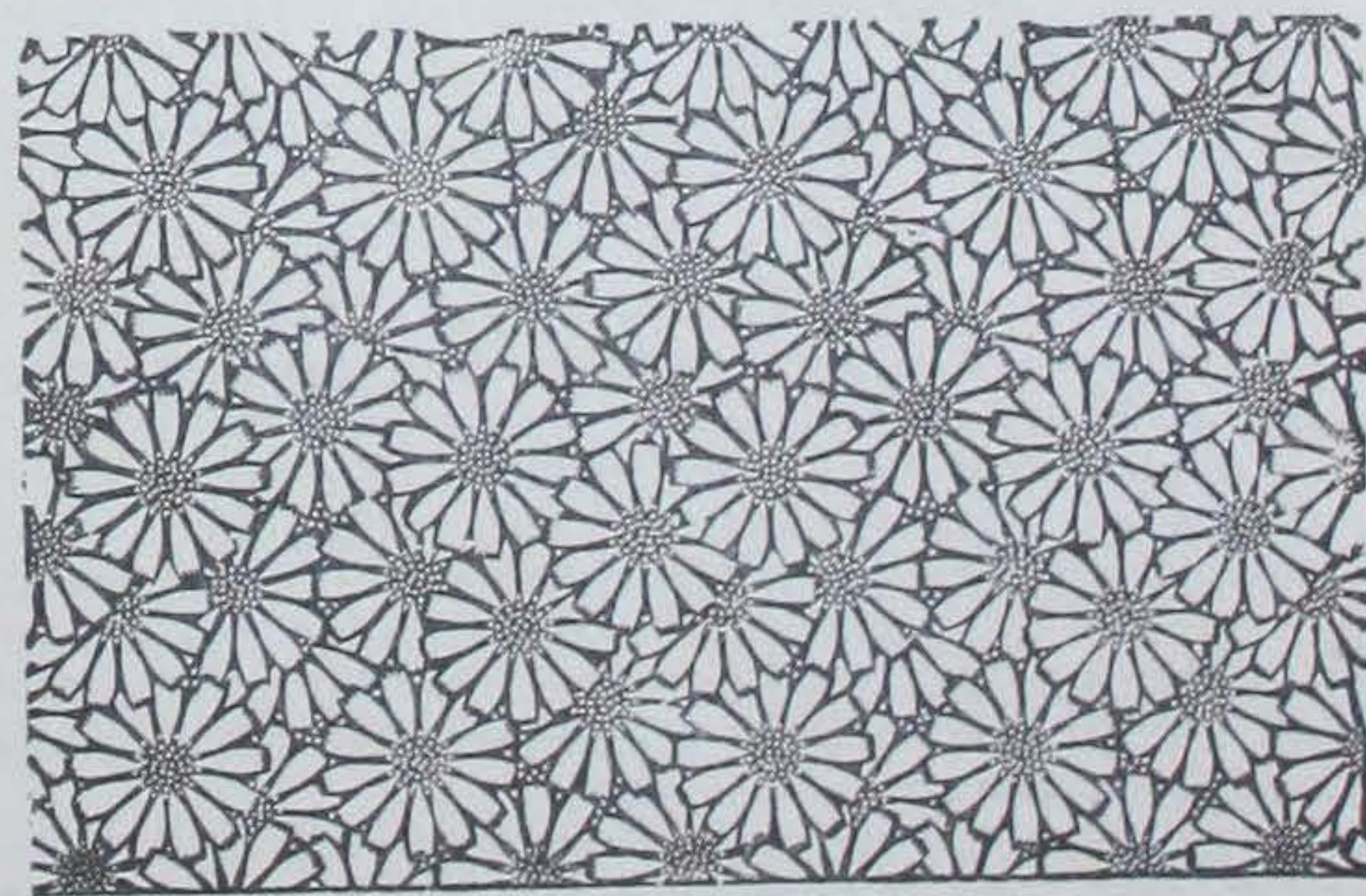
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DESIGN OF DAISIES.

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reach from top to base, chalk it thoroughly with white chalk or whiting, and hold it firmly and tightly to the marks made at the top and bottom of the wall; the whiting on the string will come off on the wall, and make a perfectly straight line down the wall, whatever its height. Repeat this at the same distance the whole length required, then obtain the horizontal lines by stretching the chalked line from point to point across the walls, but with a distance of only a foot and a half between the lines. Follow these chalked lines steadily with a brush full of color, and with the help of a ruler, but only color the horizontal lines in the manner shown in the accompanying design (Fig. 2).

The corners of the stones can be ornamented with a scroll stencilled on, or left plain. The windows, should there be any in the wall, do not interfere, as the plumb line can be drawn across them easily. Round their embrasures a pattern assimilating to the one on the top of the wall should be stencilled; it is not necessary that these patterns should contain the same flowers or colors, but it is good taste to have them both of a set pattern, or of flowers, whichever may be chosen, and their colors should harmonize with each other. A broad line of some dark color, or a small vandyke pattern, should connect the stones with

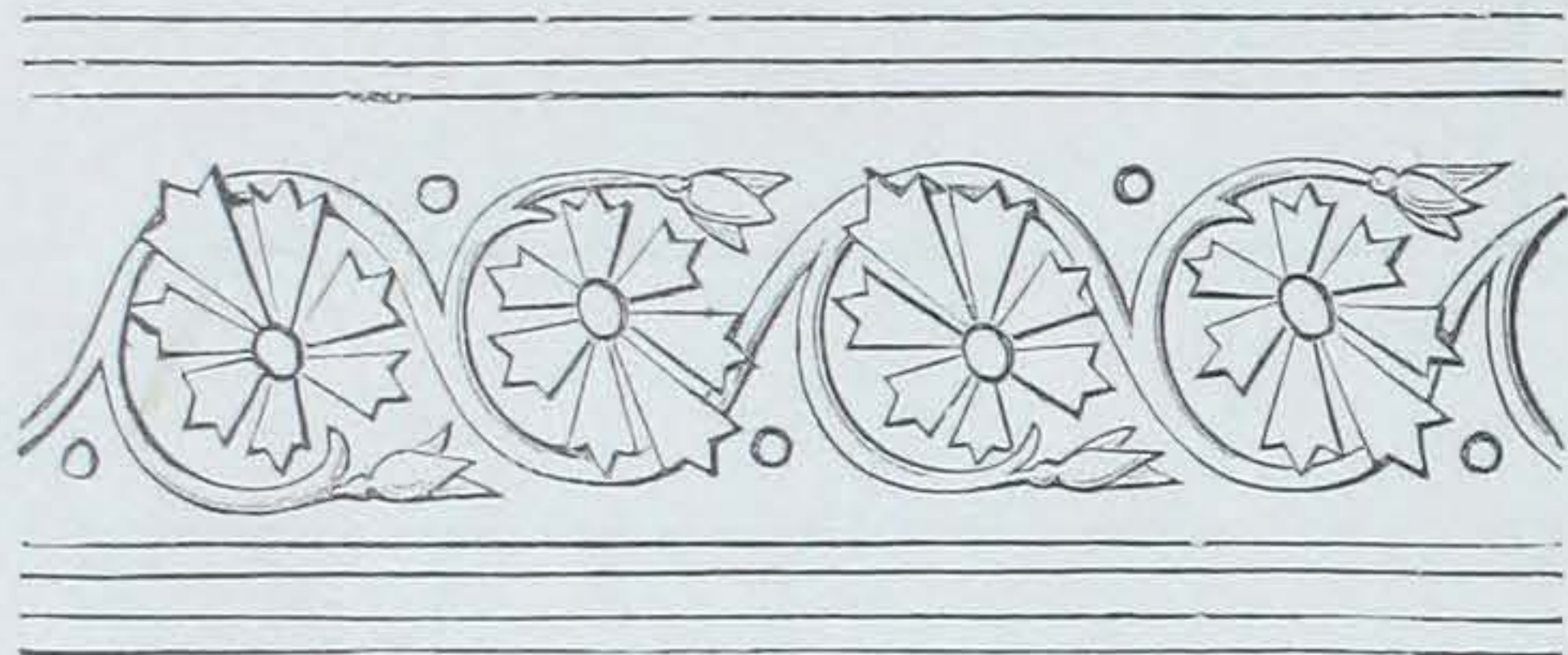


FIG. 4.—STENCILLING AND GILDING.

the three feet of color, and then the side wall is complete. For chancel or side chapel much gilding and handsome diaper patterns are required. The diaper pattern should be carried up to a height of six or seven feet from the ground. The accompanying pattern (Fig. 3) should be done thus: The ground color having been painted as before directed, and the pattern carefully cut out upon the oiled paper and laid on the wall, the diagonal lines should be brushed over with their desired color, and the spaces or stars that are to be gilded drawn round the edges of the cut pattern with white paint, or brushed entirely over with white paint; then, removing the stencilling plate, continue the same process until the whole of the wall to be painted has its rough pattern, and then prepare for gilding—an operation that requires patience and strict attention to rules, although it is a simple mechanical process.

The materials necessary are cotton wool, whiting, a cushion, knife, tip, thick and short camel's-hair brush, books of gold-leaf, and fat oil size or japanners' size. The gold-leaf is sold in books that contain twenty-five leaves, and it is also sold by the hundred leaves. It varies in color from the darkest red gold to the palest yellow. The knife is a sharp palette knife. The cushion is a piece of wood covered tightly with leather. Care must be taken that the gold-size is of the very best, but japanners' size is much used, though fat oil size is far its superior, particularly when the painting is exposed in damp places.

Commence by tying the whiting into a small muslin bag, and plentifully dust it over the parts not to be gilded. This prevents the gold-leaf sticking where it is not required; then the stars to be gilded must be painted smoothly over with oil size. It must then dry. Some size requires twelve to thirty-six hours to dry; others, such as japanners', only thirty minutes, though much depends upon the position and dryness of the walls. Those who use oil size should size over night, as it is then fit to be worked upon the next day. It is ready for use when on touching it it feels clammy and sticky, and has no appearance of running. If left too long, and no longer sticky, it is too dry for use, and must be done over again. The gold-leaf is then shaken on the cushion near the end, and one leaf is taken from the heap and laid perfectly flat upon the cushion with the aid of the knife; the tip is then taken up and brushed lightly over the hair of the painter to acquire sufficient greasiness to allow the gold leaf to adhere to it. Raise the tip with the leaf on it and lay it on the size; continue this operation until the pattern is quite covered, allowing each leaf to overlap the preceding one a small space, and working from left to right. It does not matter if the gold-leaf is too large for the star; the pieces beyond the sizing can be removed, but every nook

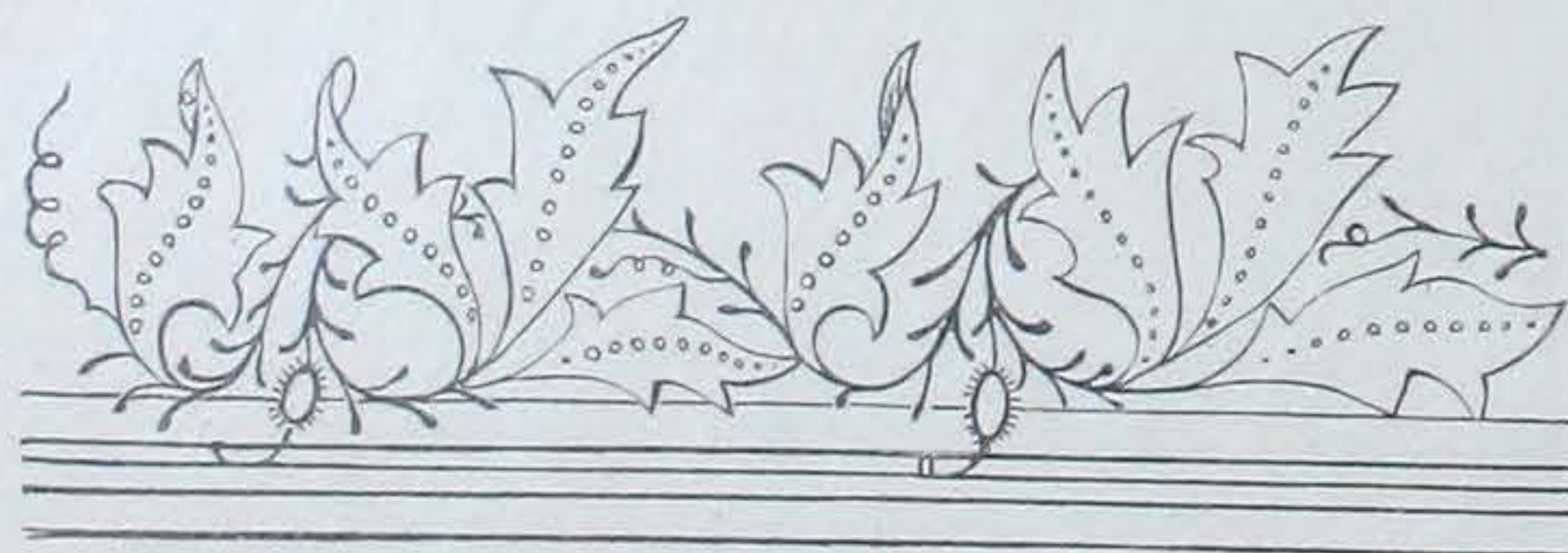


FIG. 5.—STENCILLING AND GILDING.

and cranny of the pattern must be covered with the leaf, and to fill these up the leaf can be cut on the cushion into any number of small pieces.

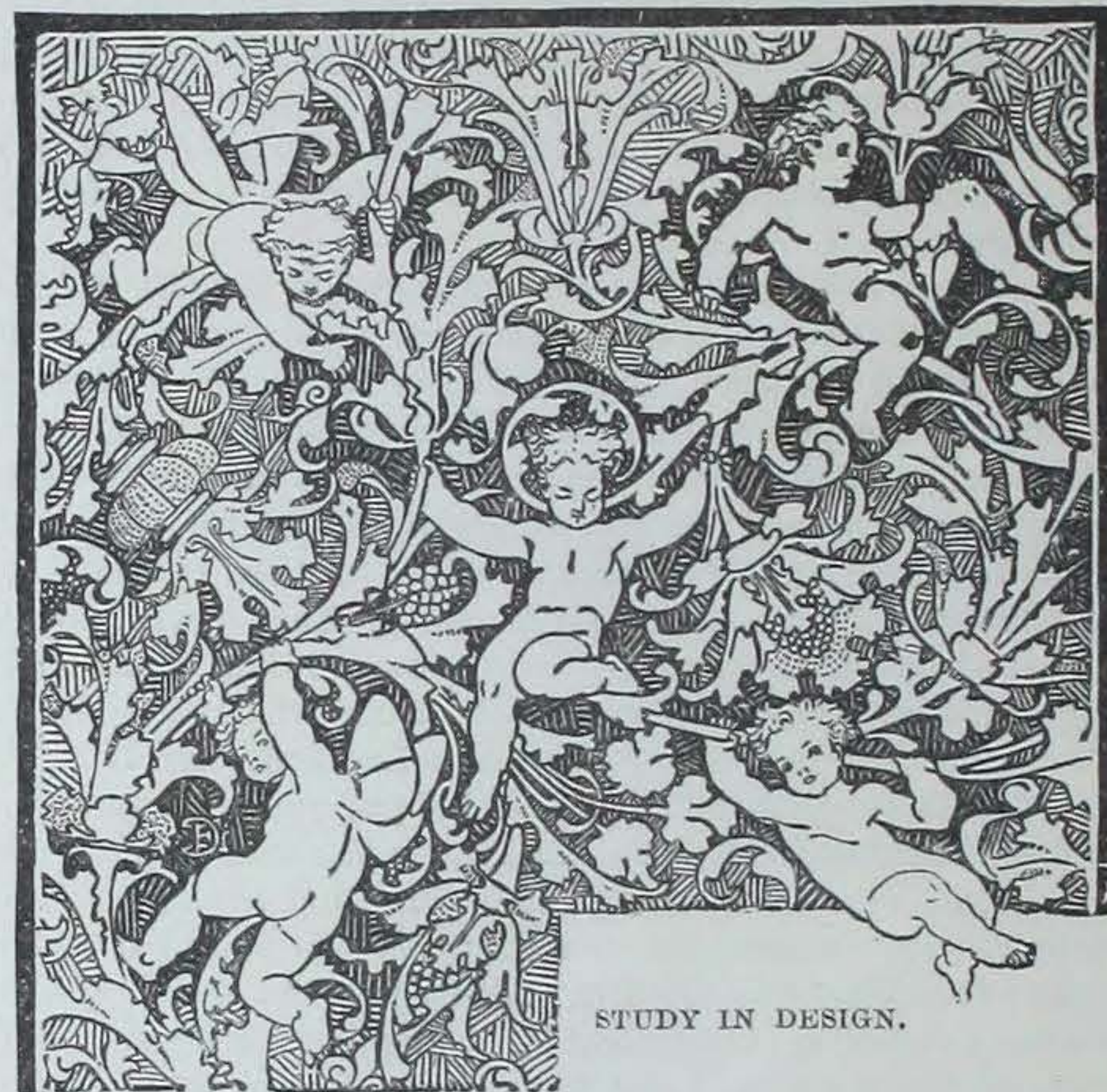
Then, with the cotton wool, press the gold-leaf very firmly down upon the size, being careful to leave no air bubbles, but that all should be perfectly flat and adhering, and remove the pieces of gold that hang from the pattern.

Now rub the gilding over with wash leather, and when quite dry dilute one-third of pure size in two-thirds of clear water, and brush over the surface of the gold to enrich and preserve it, and should the pattern be painted in a position where it is liable to be rubbed against, give the gilding a coating of mastic varnish, softened and diluted with a small quantity of turpentine.

When all the gilding is done, the remainder of the painting must be completed. The long diagonal lines being marked, the ground color requires no more treatment, but the

lines that include each gilded star in a diamond must now be ruled, and the space inside them and surrounding the star painted with a camel's-hair brush of a dark shade, but of the same color as the long diagonal lines, and then the diaper pattern is complete, unless the painter likes to put a narrow border round the top of the pattern. The border (Fig. 4) is a very effective one, and looks best on a white ground. It can be enlarged for use by drawing small squares over it, and squares to the size required upon another sheet of paper; and making whatever portion of the pattern is in the small square fit into the large.

For the margin of a square roof that is of oak or other wood, the accompanying design (Fig. 5) is very suitable. The lines on its outside should be filled in with bright bands of color, and the plain surface in the centre of the roof should be powdered over with a geomet-



STUDY IN DESIGN.

rical pattern in gold. "Powdering" is a technical term that is used when geometrical or diaper patterns are arranged over flat surfaces of color. The leaves should be colored in two or more shades of one color; pink shaded with maroon, light green with dark, gold with chocolate, Indian red lightened with salmon, and the raised dots on the leaves brought out with white or gold.

CHAPTER XV.

ABOUT THE USE OF COLORS.

The young people of the family—and older folks too—would do well to commit the following rhyming lines to memory. They are the composition of Henry Hopley White, and originally appeared in London as a convenient accompaniment to a diagram illustrating the relations of the colors:

Blue, yellow, red, pure simple colors all,
By mixture unobtained, we primaries call;
From these, in various combinations blent,
All the colors trace their one descent.
Each mixed with each, their powers combined diffuse
New colors forming secondary hues;
Yellow with red makes orange, with blue, green;
In blue with red admixed, is purple seen.
Each of these hues in harmony we find,
When with its complementary combined;
Orange with blue, and green with red agrees,
And purple tints, near yellows, always please.
These secondaries tertiaries produce,
And citrine, olive, russets, introduce;
Thus green with orange blended forms citrine,
And olive comes from purple mixed with green;
Orange, with purple mix'd, will russet prove;
And, being subject to the rule above,
Harmonious with each tertiary we view
The complemental secondary hue.
Thus citrine, olive, russet harmonize
With purple, orange, green, their true allies.
These hues, by white diluted, tints are made;
By black, are deepened into darkest shade.
Pure or combin'd, the primaries all three,
To satisfy the eye must present be;
If the support is wanting but of one,
In that proportion harmony is gone;
Should red be unsupported by due share
Of blue and yellow pure, combined they are
In green, which secondary, thus we see,
The harmonizing medium of all three.
Yellow for light contrasts dark purple's hue,
Its complemental, form'd of red and blue.
Red most exciting is. Let nature tell
How grateful is, and soothing, green's soft spell.

So blue retires, beyond all colors cold,
While orange warm, advancing you behold.
The union of two primaries forms a hue
As perfect and decided as 'tis new;
But all the mixtures which all three befall
Tend to destroy and neutralize them all;
Nay, mix them—three parts yellow, five of red,
And eight of blue—then color all has fled.
When primaries are not pure, you'll surely see
Their complementals change in due degree;
If red with yellow to a scarlet tend,
Some blue its complemental green will blend;
So if your red be crimson, blue with red,
Your green with yellow would be varied;
If yellow tends to orange, then you find
Purple, its complement, to blue inclined;
But if to blue it leans, then mark the change,
Nearer to red you see the purple range.
If blue partakes of red, the orange then
To yellow tends; if yellowish, you ken
The secondary orange glows with red.
Reader, farewell! my lesson now is said.

The axioms and rules of color prepared and published by Dr. Dresser, form an admirable compend for the guidance of persons interested or engaged in the decoration of the house. We subjoin them with the remark that they may be employed in the fullest confidence.

1. Regarded from an art point of view, there are but three colors, namely, blue, red and yellow.
2. Blue, red and yellow have been termed primary colors; they cannot be formed by the admixture of any other colors.
3. All colors other than blue, red and yellow result from the admixture of the primary colors.
4. By the admixture of blue and red, purple is formed; by the admixture of red and yellow, orange is formed; and by the admixture of yellow and blue, green is formed.



INDIAN CARPETS.

5. Colors resulting from the admixture of two primary colors are termed secondary; hence purple, orange and green are secondary colors.
6. By the admixture of two secondary colors a tertiary color is formed; thus, purple and orange produce russet (the red tertiary); orange and green produce citrine (the yellow tertiary); and green and purple, olive (the blue tertiary); russet, citrine and olive are the three tertiary colors.
7. When a light color is juxtaposed to a dark color, the light color appears lighter than it is and the dark color darker.
8. When colors are juxtaposed, they become influenced as to their hue. Thus, when red and green are placed side by side, the red appears redder than it actually is, and the green greener; and when blue and black are juxtaposed, the blue manifests but little alteration, while the black assumes an orange tint or becomes "rusty."
9. No one color can be viewed by the eye without another being created. Thus, if red is viewed, the eye creates for itself green, and this green is cast upon whatever is near. If it views green, red is in like manner created and cast upon adjacent objects; thus, if red and green are juxtaposed, each creates the other in the eye, and the red created by the green is cast upon the red, and the green created by the red is cast upon the green; and the red and the green become improved by being juxtaposed. The eye also demands the presence of the three primary colors, either in their purity or in combination; and if these are not present, whatever is deficient will be created in the eye, and this induced color will be cast upon whatever is near. Thus, when we view blue, orange, which is a mixture of red and yellow, is created in the eye, and this color is cast upon whatever is near; if black is in juxtaposition with the blue, this orange is cast upon it, and gives to it an orange tint, thus causing it to look "rusty."
10. In like manner, if we look upon red, green is formed in the eye, and is cast upon adjacent colors; or if we look upon yellow, purple is formed.
11. Harmony results from an agreeable contrast.
12. Colors which perfectly harmonize improve one another to the utmost.

13. In order to perfect harmony, the three colors are necessary, either in their purity or in combination.

14. Red and green combine to yield a harmony. Red is a primary color, and green, which is a secondary color, consists of blue and yellow—the other two primary colors. Blue and orange also produce a harmony, and yellow and purple, for in each case the three primary colors are present.

15. It has been found that the primary colors in perfect purity produce exact harmonies in the proportions of 8 parts of blue, 5 of red, and three of yellow; that the secondary colors harmonize in the proportions of 13 of purple, 11 of green and 8 of orange;

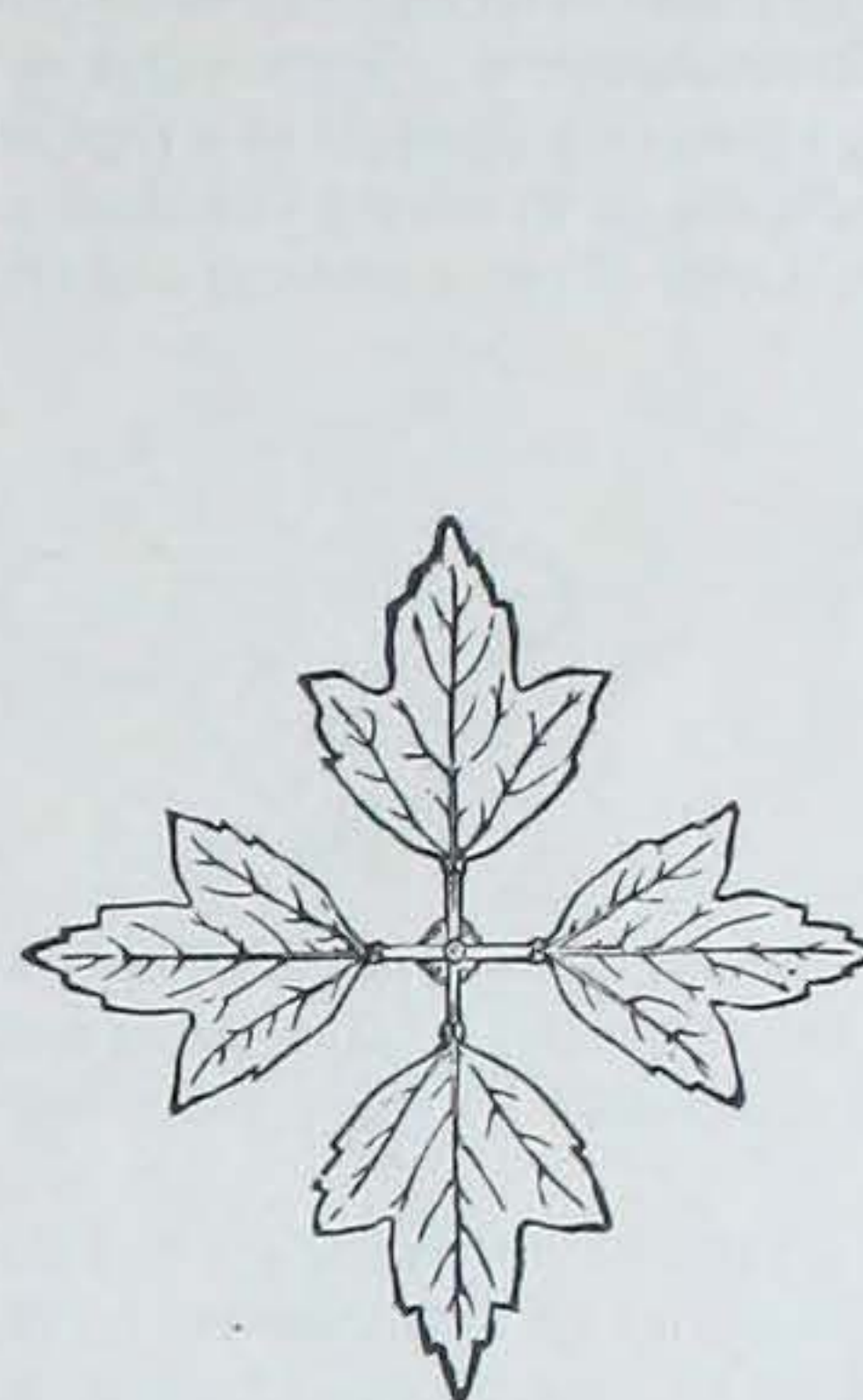


FIG. 1.

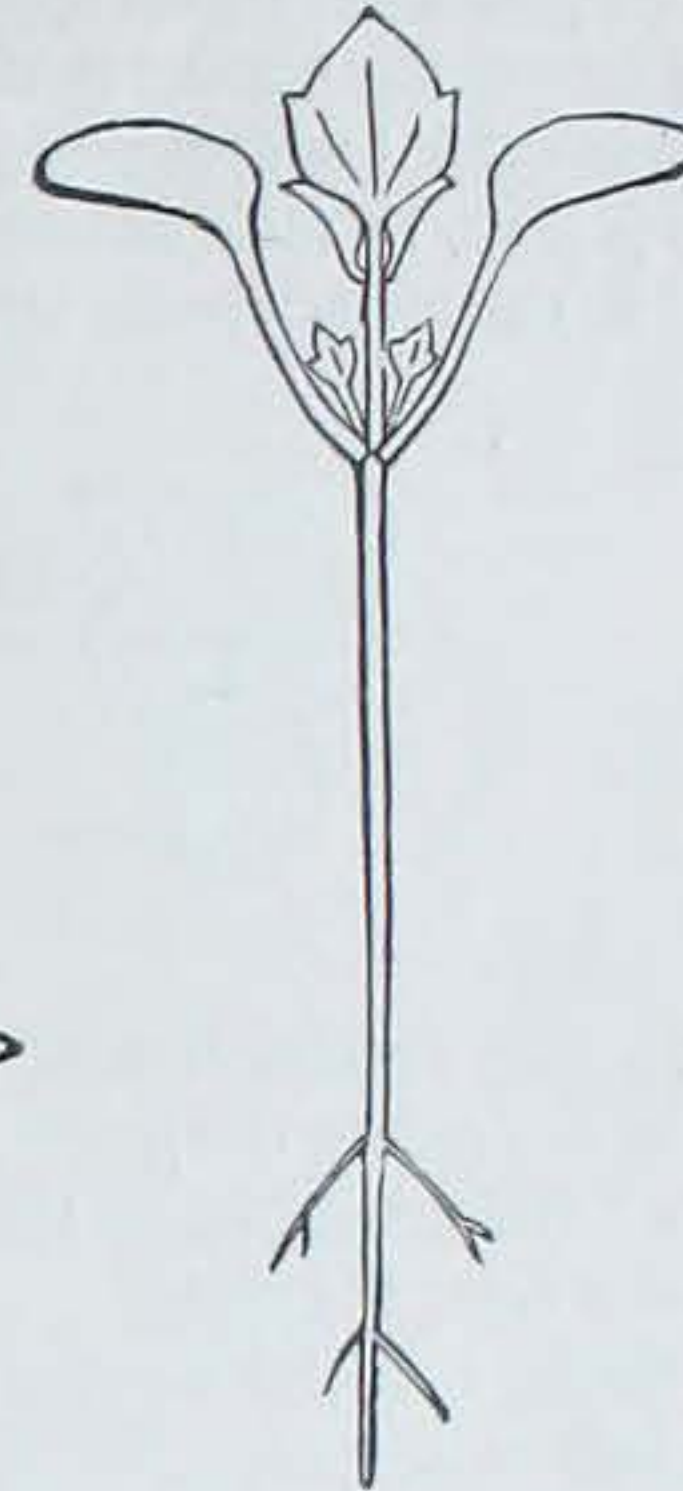


FIG. 3.

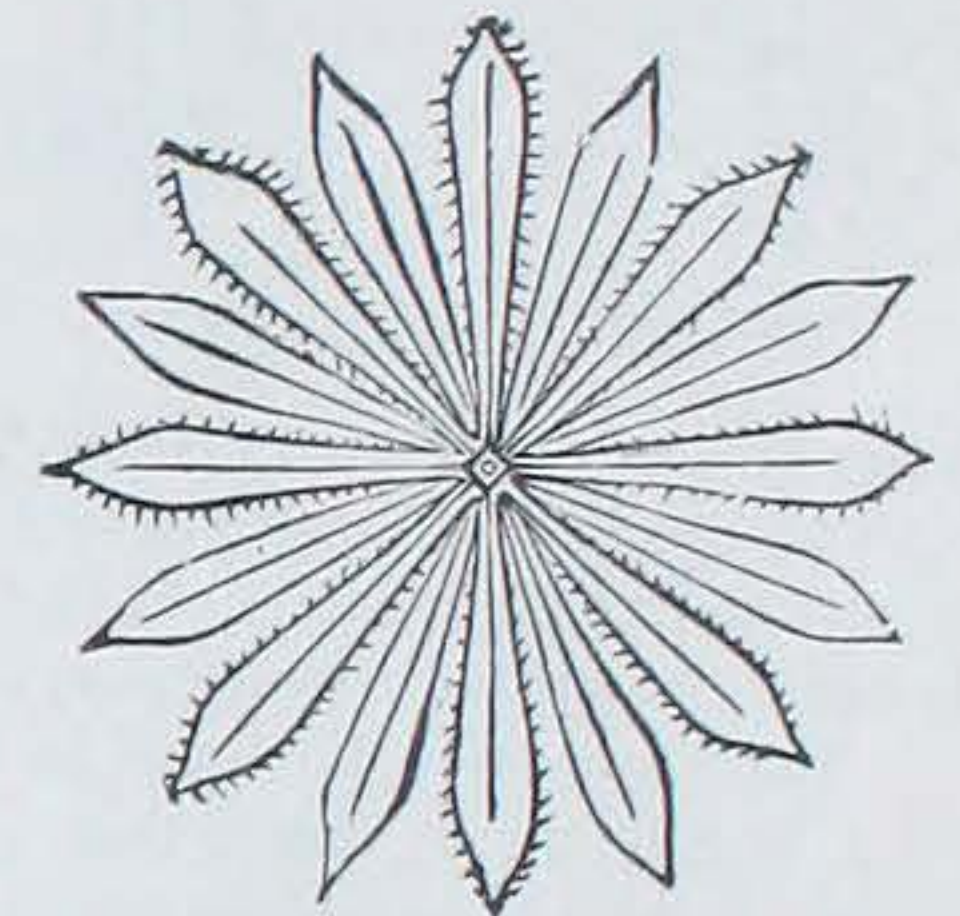


FIG. 2.

and that the tertiary colors harmonize in the proportions of olive 24, russet 21, and citrine 19.

16. There are, however, subtleties of harmony which it is difficult to understand.
17. The rarest harmonies frequently lie close on the verge of discord.
18. Harmony of color is, in many respects, analogous to harmony of musical sounds.
19. Blue is a cold color, and appears to recede from the eye.
20. Red is a warm color, and is exciting; it remains stationary as to distance.
21. Yellow is the color most nearly allied to light; it appears to advance toward the spectator.
22. At twilight blue appears much lighter than it is, red much darker, and yellow slightly darker. By ordinary gaslight blue becomes darker, red brighter, and yellow lighter. By this artificial light a pure yellow appears lighter than white itself when viewed in contrast with certain other colors.
23. By certain combinations, color may make glad or depress, convey the idea of purity, richness or poverty, or may affect the mind in any desired manner, as does music.
24. When a color is placed on a gold ground, it should be outlined with a darker shade of its own color.
25. When a gold ornament falls on a colored ground, it should be outlined with black.
26. When an ornament falls on a ground which is in direct harmony with it, it must be outlined with a lighter tint of its own color. Thus, when a red ornament falls on a green ground, the ornament must be outlined with a lighter red.
27. When the ornament and the ground are in two tints of the same color, if the ornament is darker than the ground, it will require outlining with a still darker tint of the same color; but if lighter than the ground no outline will be required.

CHAPTER XVI.

CARPETS.

A wall pattern may desirably have an upward direction and a bilateral symmetry, but a carpet pattern must be equally extended all over the surface, or have a simple radiating symmetry. This applies whether its pattern be simple or complicated.

The reason is, that if an object is placed on a wall, from whatever point the occupants of the room may view it, it is yet right way upward to them; but if such an object were placed on a floor it would be wrong way upward, or sideways, or oblique to most of those



FIG. 4.



FIG. 5.

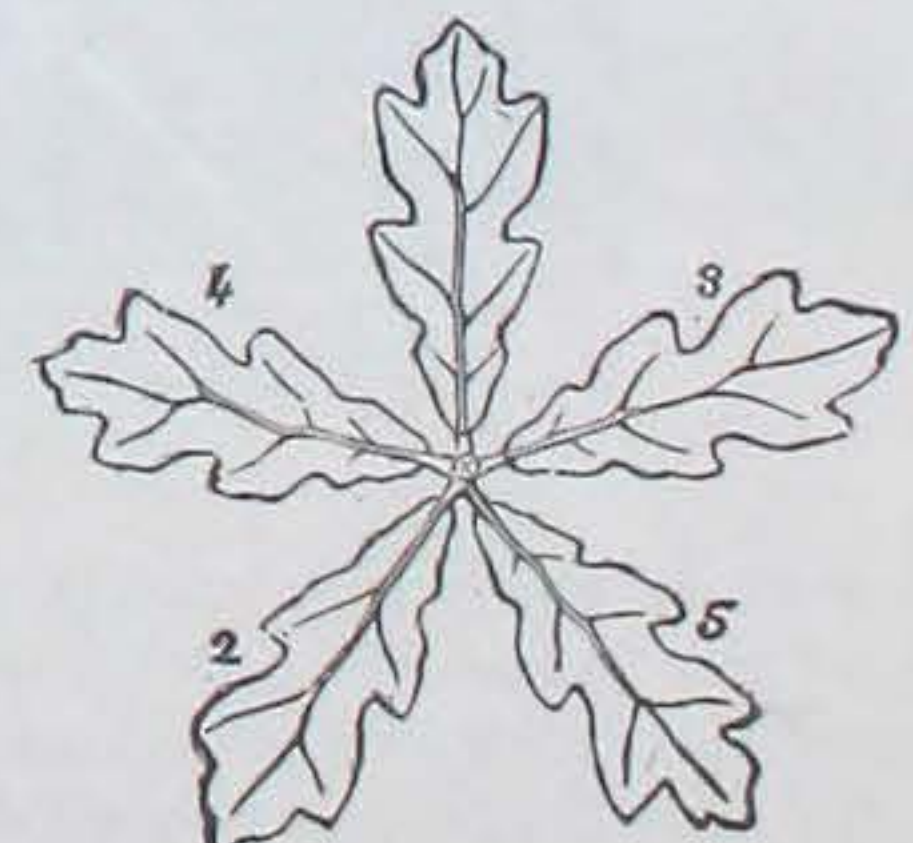


FIG. 6.

who viewed it; and to employ a pattern of this character in such a position is highly absurd, when a pattern can as readily be formed which will avoid this unpleasantness. What would we think were we asked to view a picture, or even to visit an apartment containing such, were this work of art presented to our view in an averted manner?

This principle is readily illustrated. If we wander over the moor, where we tread on Nature's carpet, we find that all the little plants which nestle in the short mossy grass, are

"radiating ornaments"—that is, they are pretty objects which consist of parts spread regularly from a centre. We give here and on page 27 illustrations of this idea of conventionalizing natural forms. Figure 1 is a drawing of a spray of the guelder-rose as seen from above, or when viewed as a floor pattern. Figure 2 is a portion of goosegrass seen in the same way. Figure 3 represents a young plant of a species of speedwell as a wall ornament, and Figure 3 a the same plant when seen as a floor ornament. It is shown by Figures 4, 5, 6, that even when the leaves appear somewhat dispersed upon the stem, a principle of order can yet be distinctly traced in the manner of their arrangement, and here also the top view gives a regular radiating ornament. The spray here represented is that of the oak, and the diagram (Figure 4) shows the orderly spiral manner in which the leaves spring from the stem. The same law prevails in the flower that has been traced as existing in the arrangement of leaves upon the stem; thus Figure 7, which represents the London pride, affords an example of a regular radiating flower, which we find so placed, in different examples, as to appear as a floor or wall ornament; and Figures 8 and 9, the former being the flower of the speedwell and the



FIG. 7.



FIG. 8.



FIG. 9.

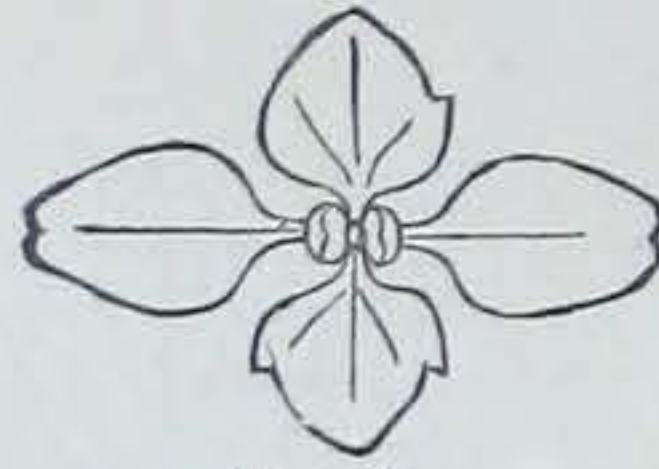


FIG. 8a.

latter that of the common pansy, furnish illustrations of bilateral flowers intended only as wall ornaments. In order to secure our seeing the pansy only laterally, it is furnished with a bent stalk; hence it never rests horizontally upon the summit of its stem, but always hangs so that it is perfectly seen only from the side.

There are cases, however, in which bilateral flowers are placed horizontally; but it is very interesting to notice that when this occurs the disposition or arrangement of the flowers is such as to restore the radiating symmetry. Thus if we take the candytuft or the common hemlock, we find that while each flower is bilateral in character, the flowers are yet arranged around a centre in such a manner that the smaller portion of each flower points to the centre of the flower-head, while the larger parts point outward from the centre of the group. These, then, are the teachings of plants, to which we are called upon to hearken.

The principle of plant-growth is illustrated in order to impress the necessity of giving a radiating basis to the ornaments placed upon carpets, and not a bilateral structure. It is a necessity that a carpet pattern have a radiating structure, or, in other words, that it point in more than two directions.

Among the requirements of a carpet are that it should be soft in texture, rich in appearance, and of "bloomy" effect. It should also be a suitable background to all works of furniture or other objects placed upon it, and in character it should accord with the objects with which it is associated in any particular apartment.

Softness is a very desirable quality of a carpet, but it is hardly an art quality. As to the quality of richness, no carpet is satisfactory which is "washy" or faded in appearance. There must be "depth" of effect—a "fullness" of art quality. Hangings may be delicate,



INDIAN CARPET.

wall-decorations soft in tint, but a carpet must be rich and "full" in effect; yet a general softness of tone is desirable. But this richness must be of singular character, for the most desirable effect which a carpet can present is that of a glowing neutral bloom. We mean by this that the effect should be glowing or radiant, or bright, as opposed to dull, quiet, or heavy; that it should be such as results from the use of a predominance of bright and warm colors, rather than of cold and neutral hues; that it should be neutral, inasmuch as it should not present large masses of positive color, but should have an equality of rich harmonious colors throughout; that it should be "bloomy," or have the effect of a garden full of flowers, or better, of the slope of a Swiss Alp, where the flowers combine to form one vast harmonious "glow" of color.

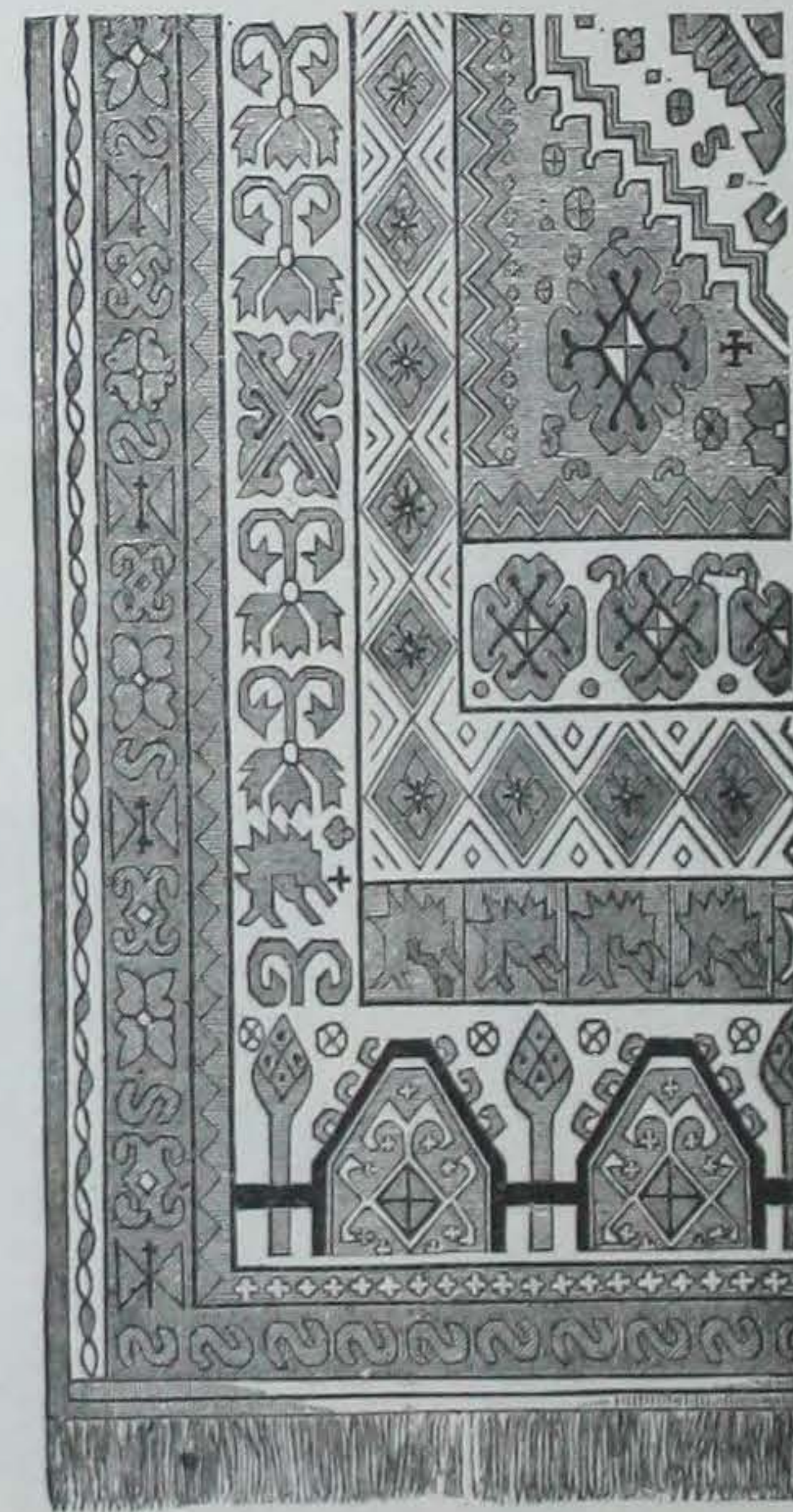
These bloomy effects in their more perfect forms are best seen in the carpets of India, Persia, Smyrna, and Morocco, but especially in the Indian rugs. The illustrations are

good examples of Indian carpets and excellent models of design for "all-over" patterns. Persian carpets are less radiant than many of the Indian works, but are almost more mingled in color effect. In pattern many of the Indian and Persian carpets are identical, being traditional, yet in color they differ, and both are worthy of much consideration. In Morocco carpets soft yellows and juicy yellow-greens often prevail, intermingled with reds, blues, and gray whites, in such a manner as to produce a most harmonious and artistic effect.

What is most desirable in "all-over" patterns, which characterize Indian and Persian carpets, is an evenly spread pattern, such as will give richness without destroying the unity of the entire effect. The pattern may have parts slightly accentuated or emphasized beyond other parts, but not strongly so, and this emphasizing of parts must be arranged with the view of securing to the pattern special interest; thus if a carpet is viewed at a distance, it should not appear as devoid of all pattern, but through the slight predominance of certain leading features (in Indian carpets, generally of ornamental flowers) the plan of the design should be indicated. More detail should be apparent when the work is seen from a nearer point of view, and still more upon close inspection; but in no case should any parts appear strongly pronounced, or otherwise than refined and beautiful, and in no case should there be a want of interest manifested by the pattern.

In concluding this chapter we summarize the conditions which should govern the application of ornament to carpets:

- 1st. Carpet patterns may with advantage have a geometrical formation, for this gives to the mind an idea of order or arrangement.
- 2d. When the pattern has not a geometrical basis, a general evenness of surface should be preserved.
- 3d. Carpets are better not formed into "panels," as though they were works of wood



MOROCCO CARPET.

or stone; on the contrary, they should have a general "all-over" effect without any great accentuation of particular parts. The Indian and Persian carpets meet this requirement.

4th. While a carpet should present a general appearance of evenness, parts may yet be slightly "pronounced" or emphasized, so as to give to the mind the idea of centres from which the pattern radiates.

5th. A carpet should, in some respects, resemble a bank richly covered with flowers; thus, when seen from a distance the effect should be that of a general "bloom" of color; when viewed from a nearer point it should present certain features of somewhat special interest; and when looked at closely new beauties should make their appearance.

6th. As a floor is a flat surface, no ornamental covering placed on it should make it appear otherwise.

7th. A carpet, having to serve as a background to furniture, should be of a somewhat neutral character.

8th. Every carpet, however small, should have a border, which is as necessary to it as a frame is to a picture.

CHAPTER XVII.

SCREENS.

Rather than to extend farther the chapter on needlework, we have reserved our observations on needlework screens, for this place, in which we have also something to say concerning that pleasant home occupation, the making of picture screens.

Picture or scrap screens are not only very interesting to make, but are very pretty in effect, as each side has all the appearance of a continuous picture illustrative of some subject.

The framework can be made by a carpenter of the number of panels and size wished for. Three panels, each panel sixty-two inches high and twenty-two inches wide, make a good size for a drawing-room; and four panels six feet high and two feet wide, for a

dining-room or library. The wood must be well seasoned, and each panel must be made of exactly the same size, so that all may be quite even when folded together. It looks best to have the bottom part of the framework made a little deeper than that at the top and the sides. Width of framework at the top and sides about two inches; width of frame at the bottom about two and a half inches. There should be two bars across, about two inches wide.

Get some unbleached muslin at a dry-goods store. It requires picking over, to take out the knots which are generally found in it. The width will be sufficient; the length required will depend on the height of the panels as well as the number of them, and can be easily calculated. Soak the muslin in hot water to shrink it, and when it is nearly dry nail it with small tin tacks along the top, round the edge of the panel, pulling it very tight all the time, so as to stretch it as much as possible. Then fasten it down the sides and the bottom; do the other side of the panel the same. This requires a good deal of pulling, as

it must be stretched tightly, and if a lady does not like to do it herself, a carpenter will do it for so much a panel. The cloth must be brought round the edge of the panel, so that the nails are on the outside edges and none on the front of the framework. Get a few cents' worth of common white size, cut it in small pieces and put it into a white preserve jar with a very little water at the bottom. Put it on a hot hearth to melt, stirring it occasionally with a piece of stick. When quite melted, brush it on the cloth thinly, but all over with a painter's brush; rather a large one is best, as it can be done sooner with it. Work quickly in a warm place, keeping the size hot until both sides of the cloth on each panel are sized. It will soon dry and be ready for papering. If the screen is to be covered with colored pictures, which are the most effective, buy what is called lining-paper (white), sold in pieces twelve yards long, where wall-papers are sold. Lay one of the panels on a table or large board, and measure off the length of paper required by laying it on the screen. Each side must be in one piece, as joints would show a crease. Six strips will be required for a three-leaved screen, and eight for a four-leaved. Lay one of the strips of paper on a panel, and, with good smooth, common flour paste, brush it thickly but evenly all over, using a brush similar to the one for sizing. It must be thoroughly and smoothly pasted, no spaces left or knots of paste, and it can then be turned over so as to lay the side on which the paste is on to the cloth. This is best done by two persons, one at the top and the other at the bottom, taking hold of each corner, turning it, and laying it very evenly on to the cloth, arranging it carefully to fit the

shape, but not to fold over the edges. This, at first, is a little troublesome, but practice soon makes it very easy. When laid smoothly dab it with a clean cloth, pressing it gently, and rubbing out any creases or air bubbles, and this must be done quickly, before the paste gets dry. Cover both sides of the panel in the same way, and when all parts are dry size the paper all over in the same way as the cloth was sized, and then it is ready for the pictures.

If the cloth has been well stretched, and the paper properly pasted, the surface of the panel will be quite smooth, and as tight as a drum. Common flour paste is used to put on the pictures with, but before beginning work, it is wise to have a tolerable collection to select from. The colored pictures may be procured at various prices and in many ways. Some screens have been priced at two or three hundred dollars, from being

covered with very expensive pictures; but very good and amusing effects may be obtained with pictures costing much less, if judiciously selected. In arranging the pictures on the screen care must be taken to contrast the colors well, and it is a good plan to cover each panel in a different style. The easiest way of doing so is to put on pictures, without cutting them out, in somewhat regular order, and then to cut out flowers and arrange them round each one as if in a frame. Another mode is to cut out most of the pictures and arrange them in a confused way, part of a picture in one place and part elsewhere—any absurdity of composition is effective. Flowers may be added occasionally, but not so frequently as in the first style. Another, and the most artistic, but the most difficult to arrange well, is for each panel to depict a distinct subject, such as spring, summer, autumn and winter.

For spring—bright green trees and turf, birds singing, eggs, nests, crocuses and any other spring flowers; a little love-making, children grouped in various ways, and every-

thing fresh and young. For summer—ripe fruit, brilliant flowers, haymaking, fishing, boating, hot sunny views and shady retreats, trees in full leaf. For autumn—shooting, hunting, corn-fields, reaping, gleanings, hop-picking, live and dead game, autumn-tinted trees and the seasonable fruit and flowers. For winter—skating and other winter sports, snow scenes enlivened by bits of red from robins, fires or red cloaks, holly and mistletoe, old people, and everything else marking the end of the year, or of life.

Screens are very good pieces of furniture for the display of embroidery, and may be treated with almost endless variety. Large folding screens are covered with brown linen or serge, and worked in crewels with large flowers—giant poppies, crown imperials, sunflowers, flags, lilies, hollyhocks, dahlias, thistles, and the like stand in the panels, each stiffened into a fit arrangement, upright, as it were "at attention," and so contrived, by balance of leaf and flower and bud, that each will be of about the same weight and form. Some dark edges will be required as framework; if the screen itself does not supply it, bands of leather with a tiny gilt pattern on them will answer the purpose.

A similar screen in which much art is employed, yet which is still simple, is made of brown linen. It is nearly five feet high, in three leaves, two of them being alike, worked in crewels and silk. At the foot is a small dado of green linen about one foot in height, on which is worked, on the first panel, primroses between two bunches of daisies; above on the unbleached linen, rise to the height of two and a half feet three tall day lilies,

their yellow petals worked in silk, the leaves in crewel, which, coming closer together as they reach the dado, bring all into harmony. On the middle panel sunflowers stand in the place of the day lilies, and below, daffodils and primroses are worked on the green; the third panel is a repetition of the first. The space at the top of the screen is left clear.

Panel screens of a rather smaller size are excellent subjects for fine embroidery. Gold-colored silk, satin, or brocatelle, is one of the best grounds for them, as this color has an admirable quality of harmonizing other colors put upon it, and also it is sure to look well in any room, whatever may be the tone of the decoration. White flowers are beautiful on this ground. A row of large white lilies standing up on the panel, with a few light branches of roses and carnations among their stems, is a beautiful arrangement taken from a fourteenth century picture. This also looks very well on a pale blue ground: then there



DESIGN FOR A SCREEN.

must be very little pink in the roses, and cornflowers will be a good substitute for the carnations.

A peacock with his tail displayed makes a splendid panel for a screen. He must be conventionalized into an heraldic aspect, and even then, when his colors are generalized to the fewest, he will tax the embroiderer's skill to make him gorgeous enough. Gold-color, black, brown, blue, or green, will make him a good background. He looks well in a single panel by himself, or in a three-leaved screen, with peahens right and left of him. Cocks and pheasants will also make him good supporters.

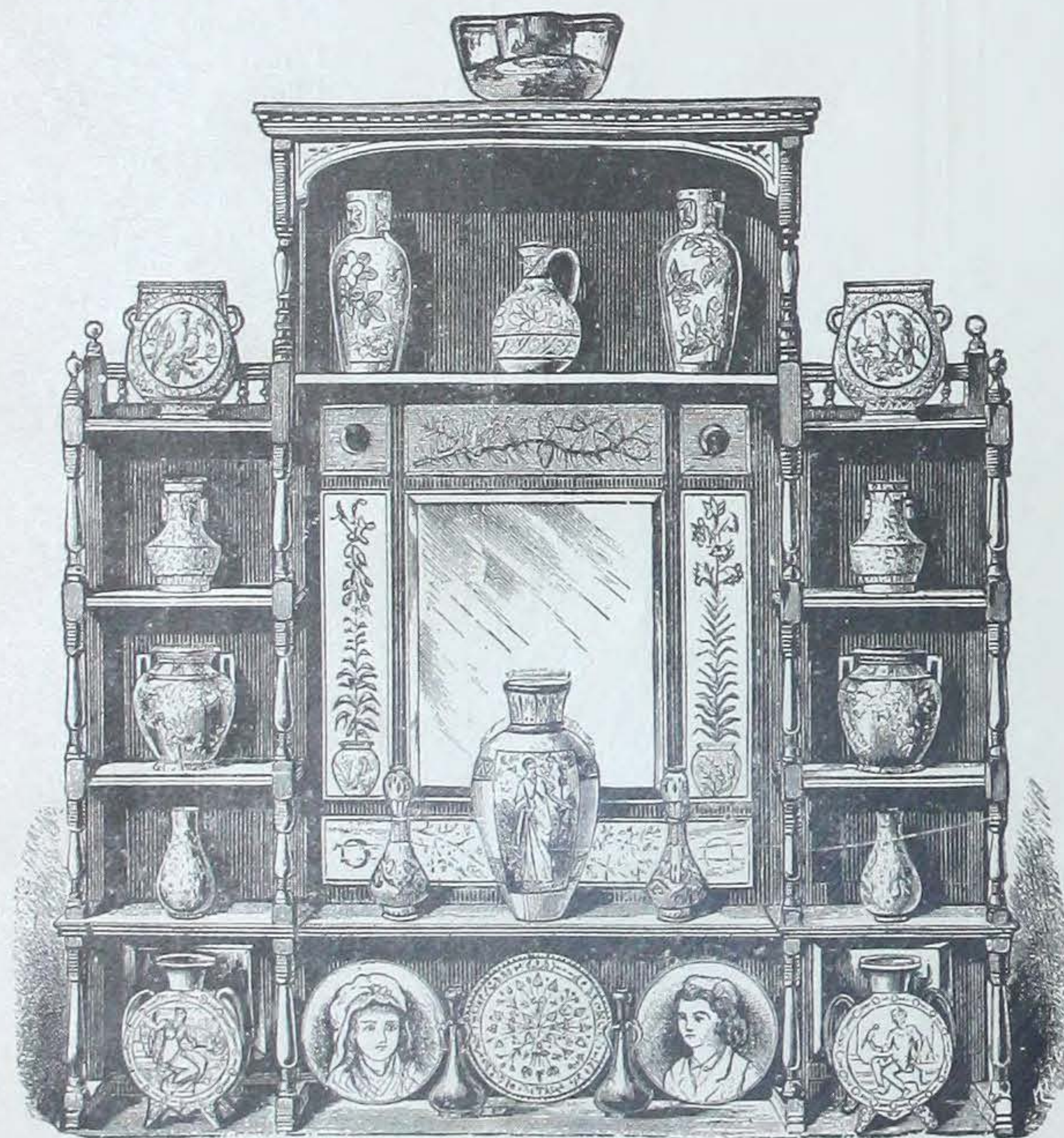
If water birds are used they should be associated together. Swans are rather unwieldy masses of white, but cranes, flamingoes, and ducks of different kinds work well. The water and other surroundings must be indicated with reticence, not attempting a pictorial representation, though the balance of form and color requires the same consideration as in a picture.

Another treatment of panel screens has a Japanese inspiration, and each panel is a kind of suggestive picture. The more solid plants grow up from the ground, or out of very conventional water. Higher up a bird flies across, or perches, and is balanced by a suggestion of cloud, a flight of distant birds, or a projecting spray or hanging branch of lighter flower. This may be carried out on black, brown, or deep blue satin, or, if a light ground be preferred, on white silk, or pale buff, or green satin, working on these materials with fine silks, and using gold twist and thread to heighten the effect. Care should be taken not

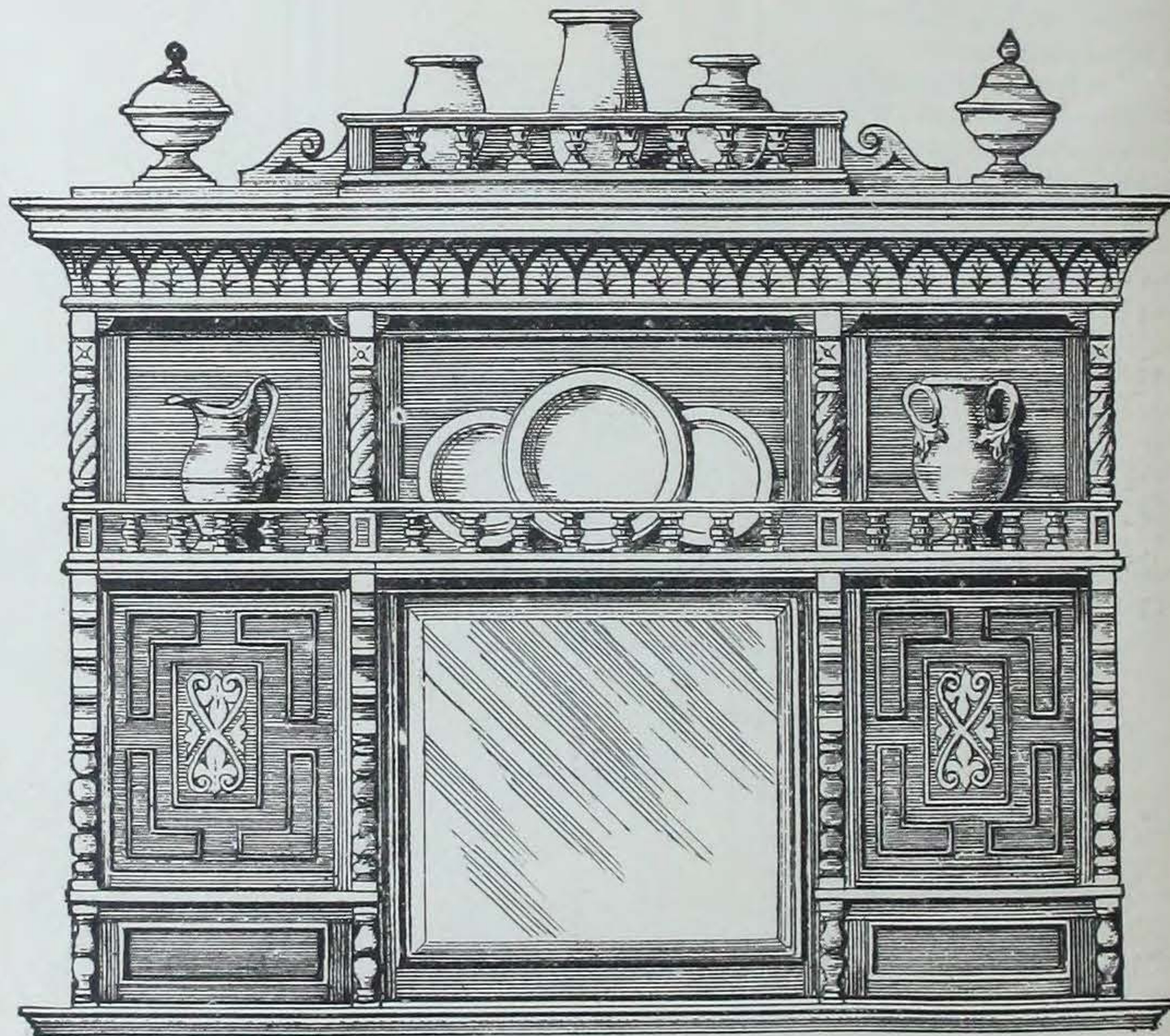
Linen or silken fabrics are the best for panel screens. Velvet is not very suitable, and woolen materials seem a little out of place, though serge cloth has often been used with success. Silk sheeting is often good in color and pleasant to work on, but it is disappointing in wear, and should not be used for important pieces of work.

Smaller fire-screens are very good subjects for elaborate and careful embroidery. There is no limit to the variety of ornament that may be adapted to them. They are near the eye, and usually by their position claim attention that in too many cases they do not deserve. The flat stiff screen screwed to the chimney-piece is not often used with the kind of decoration here recommended. A movable panel is a better form; so is a pole to which the banner is hung, or a standing frame in which it swings by the upper end. For these an heraldic device would be very appropriate, the shield either entirely of stitches, or with the blazon embroidered on the applied silk for the field. Crests, badges, emblems, devices, mottoes, and all sorts of mediæval fancies, may be sought out and ingeniously turned to account for embroidery, using a little discretion in their placing and a little taste in their coloring.

If a screen fastened to the chimney-piece be required, the prettiest are those old-fashioned ones that are formed by a little curtain hanging to the cross-bar. This will be too full to be a good subject for an elaborate device in embroidery; good ones have been made of the embroidered end of an Indian scarf, and of precious pieces of costly old stuffs. If you wish to enrich your material with needlework, a diaper or a repeated pattern that will not be spoiled by hanging in folds will be good, or a "powdering" of little sprigs or tiny bouquets will look very well on the hanging stuff.



OVERMANTEL IN QUEEN VICTORIA STYLE.



OVERMANTEL IN JACOBESQUE STYLE.

to follow Japanese models so closely as to provoke a comparison with that inimitable handiwork, or to sink into a servile imitation and so to produce only a coarse copy of the original. Japanese arrangements, especially in needlework, have a character of unexpectedness and apparent disorder that is a great snare to the unwary, who do not see that this artlessness is a perfection of art, and produced by obeying, not defying, the laws of symmetry, harmony and proportion.

For screens that are to be lighter-looking, smaller flowers are used, with care that the framework of the screen be not too heavy for them. They look best in a sort of trellis pattern over the whole screen, or they may be used in "powdering," or in small groups. White satin with blue flowers; cream color, buff, or pale pink, with carnations, or small yellow or flesh-pink roses; pale blue with cornflowers or white flowers; gold-color with marigolds; various kinds of fruit, or birds, are a few only of the suggestions that might be made for these choice pieces of furniture.

Classical figure subjects are also sometimes used for screens, and though the human figure is not a good subject for embroidery of this kind, it has now and then been executed with much success—chiefly in outline with a happy number of lines and amount of detail to express the figures, an apt choice of color, and judicious heightenings of gold thread for girdles and such accessories. Some terrible examples of failures also rise before the mind's eye, and it should be remembered that to fail in so lofty an attempt as a classical figure is to fall very far, and very ignominiously.

Being a movable and detached ornament, a screen allows more liberty of fancy and individual taste than anything else properly to be called furniture, but this liberty should not degenerate into eccentricity. Thus we do not recommend grotesques; pains are wasted upon them; the eye infallibly tires of them before long, and they become no better than stale jokes. Originality does not mean doing something queer or comic, but discovering or bringing into notice some new or forgotten form of beauty, calling attention to the grace, vigor, or quaintness of some rare or perhaps too common object, or proving that some unusual combination of colors, or some new application of ornament, may gratify the eye.

CHAPTER XVIII.

OVERMANTELS AND OVERDOORS.

The three illustrations embellishing this chapter call for no extended description. That in the Queen Elizabeth style is ornate and costly, more proper to the consideration of the opulent than of the less fortunate in the community. The Queen Victoria overmantel is simple and strong, and presents a design of great merit. Manifestly a production following the third design would be a useful accession to the furniture of the library.

Times have changed since the Middle Ages, when the court of Burgundy prescribed the number of shelves or steps one might use in his "dressing" or sideboard, which was the remote ancestor of the modern overmantel. Five steps or shelves were allowed for the use of the queen during meals, four for princesses or duchesses, three for their children and for countesses or "grand dames," and other noble ladies had to be contented with two. These ancient sideboards were ornamented with elaborate carvings, and the shelves covered with napkins of silk or linen, the borders embroidered in openwork, or edged with point-lace. Subsequently they took the shape either of *étagères* or of small cupboards, with drawers half way down, and rows of shelves on the top, on which ornamental plate, metal-work, Venetian glass, majolica, etc., were set out. Some of these dressers were placed against the wall; others were made movable, to permit circulation round them for the convenience of the attendants; and etiquette determined the number of stages for occasions of state and routine.

During the seventeenth and eighteenth centuries paneled cabinets of exquisite workmanship became the vogue for the arrangement of knick-knack collections, while hanging brackets, as well as the mantel-shelf and console tables, served for the open display of decorative specimens. The hanging brackets especially were a prominent item of ornamental furniture, in Louis XIV.'s time, for the support of *buhl* clocks, busts, small bronzes, and porcelain vases.

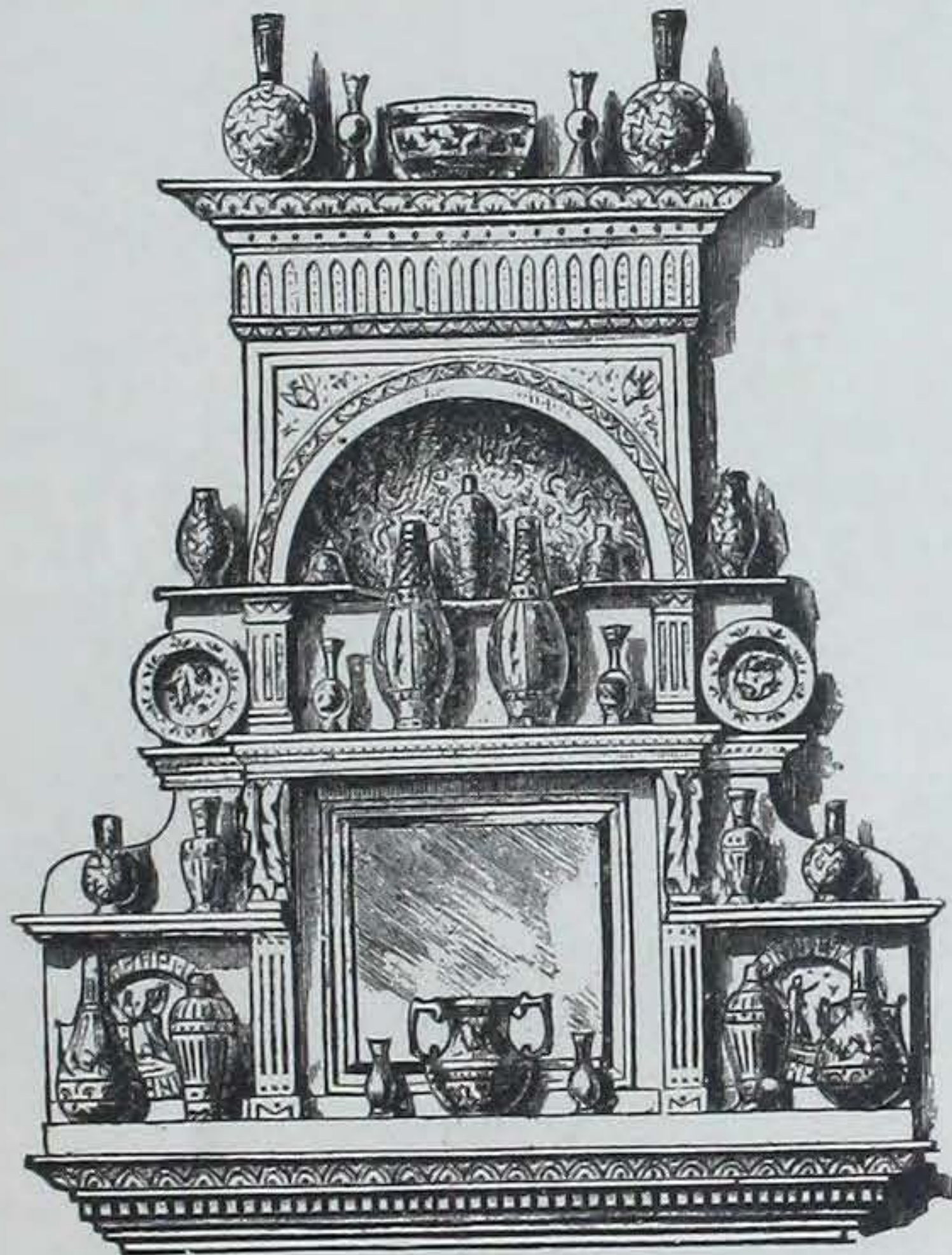
Cabinets with glass fronts appeared early in the eighteenth century for the purpose of

display, and have stood their ground ever since, supplemented by open wall and corner étagères. The modern overmantels are but modifications of the ancient shelf-stages placed on the mantel-piece. The orthodox chimney-glass, for centuries considered as indispensable, has been, if not altogether discarded, reduced to the size of a small Venetian mirror with beveled edges, framed in, flanked or topped, in étagère fashion, by shelves and compartments. For a picturesque display of artistic porcelain, pottery, and glass, of bronzes and knick-knack of any kind, overmantels are certainly the most suitable arrangement. They bring the ornaments in a convenient line with the eye, and avoid the marring effect of mirage from the glass panes of a cabinet.

A small-sized Venetian mirror with beveled edges should occupy the centre or part of the lower stage; well-chosen colored pieces of paper, leather, or velvet, silvered glass, painted tiles, or plain gilding will do duty for the paneling out of the various compartments. The color of the woodwork should be in harmony with the furniture and the wall-paper, but, as a rule, black picked out with gold looks well in almost every case.

As to the architectural character of the superstructure, straight lines are preferable to curves, and a top, slightly overhanging in the form of a cove or arch, can be introduced with advantage. The three specimens of overmantels represented in our illustrations may serve as guides in this respect.

When the shape of an overmantel has been decided upon, the selection of the ornaments for its decoration has to be considered. Much of the ultimate effect depends upon



OVERMANTEL IN QUEEN ELIZABETH STYLE.

the variety of colors and forms introduced, and upon their harmonious distribution over the various shelves and compartments.

Overdoors, which of late have likewise been utilized for the display of china, are constructed on the same principle as overmantels, and also the hanging wall or corner étagères which have come into fashion again.

CHAPTER XIX.

THE DECORATION OF DOORS.

In building, doors on which ornamentation is intended should be paneled in a manner to meet the requirements of the decorator. To arrange large and small panels, and panels of all varieties of proportion, in such order, or disorder, that there is no apparent reason why one should be emphasized more than another, and no possibility of treating them all similarly, owing to the variety of scale and shade, is a carelessness which, from the decorator's point of view, is quite unjustifiable, though it is not difficult to see the temptation to neglect the consideration of that which may not after all be under one's control. The ideally perfect way of setting to work is, obviously, so to scheme the whole from the beginning that the panels range naturally in order, or so that the important panels are, so to speak, seconded by those of minor importance. But one of the commonest faults of decoration is that the decorative intention has not been consistently kept in view throughout, and practically two-thirds at least of the decorator's work is to make the best of the bad bargain which has been made for him by the manufacturer, builder or architect. The familiar mode of paneling the doors of an ordinary room is not of any very great beauty, and the wonder is that architects do not more often vary the arrangement; but such as it is, the decorator need scarcely emphasize its monotony. The poorness of the mouldings and the undue size of the panels may indeed be to some extent corrected by lines painted within the panels, but the "line and corner" treatment, dear to the "house decorator," comes in for a share of the contempt which is bred of familiarity. The expedient frequently adopted of enriching the panels by a rich broad border of ornament, leaving a comparatively quite small space of plain surface in the centre—a sort of panel within the panel—is very happy, and it demands little more than an eye for the due proportion of border to panel.

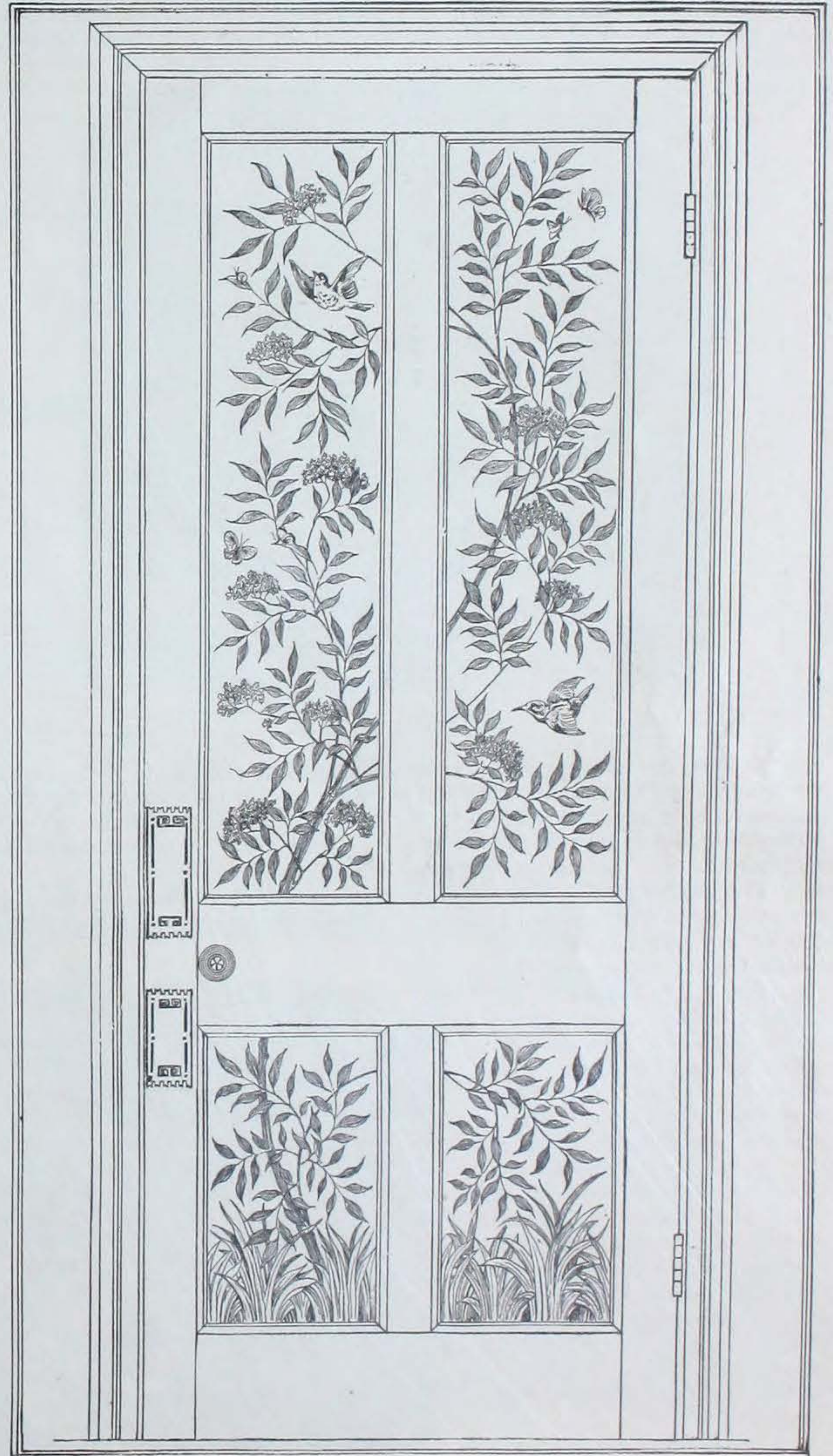
The panel shown was executed in various shades of grayish-green upon a ground of greenish-gray, that being the prevailing color of the woodwork of the room. The birds were painted in gray and soft white, the flowers in soft white and pale yellow, the colors throughout being so subdued that the effect from the end of the room was little more than that of a varied gray green door.

CHAPTER XX.

RUSTIC WORK.

The pictures on the next page are exact representations of rustic work done by a professional gentleman of New York.

"When," he says, "I go to my place in the summer, it is after nine months' hard work in my profession, and I want rest from continual reading, writing and thinking. I can't spend all my time in riding and rowing; hunting, fishing and farming have no attractions for me, and so, as a last resort, I have fallen into the habit of tinkering as a carpenter. I have partitioned off a small shop in one corner of my saw-mill, and there, with my work-bench and a few carpenter's tools, I spend the most of my time. The abundance of 'crooked sticks' all around me soon gave my labor the direction of rustic work; so that now I have three summer-houses, five or six seats, large and small, under the shade of the trees, several arbors, and quite a number of chairs and sofas scattered about the place—all



DESIGN FOR A PAINTED DOOR.

of rustic work, and every year I add something to the list. The work interests me, and pleasantly fills up my vacations.

"At first, I had to depend mainly on my own exertions for the collection of the materials and the performance of the work. But a neighbor who used occasionally to assist me in the roughest part of the labor, soon caught the inspiration, and became the better workman of the two. The rustic seat in the picture, standing under the cherry trees in the garden, was made entirely by him, with no aid from me, except looking on and occasionally giving my opinion. So adroit has he become, that, after getting the materials together, the making of the thing itself hardly costs him more than one day's work. The sofa on the piazza, however, is a much more elaborate affair, containing about five hundred pieces, and cost him and me together some ten days' labor. The latter is made to be sheltered, but the former remains out of doors all the time. All the work is made very strong and substan-

tial, and is put together with nails of different sizes, and perhaps an occasional screw. The only implements used are a hammer, a saw, a hatchet and a gimlet, with abundance of strong twine to bind the pieces together, to see how they will answer. Sometimes one favorite crooked stick will be tried half a dozen ways, to see where it will look best, and sometimes half a dozen different pieces will be tied (temporarily) in one place, to see how best to fill it; and when the decision is made, then comes the nailing, and when the pieces are firmly secured, strings are discarded.

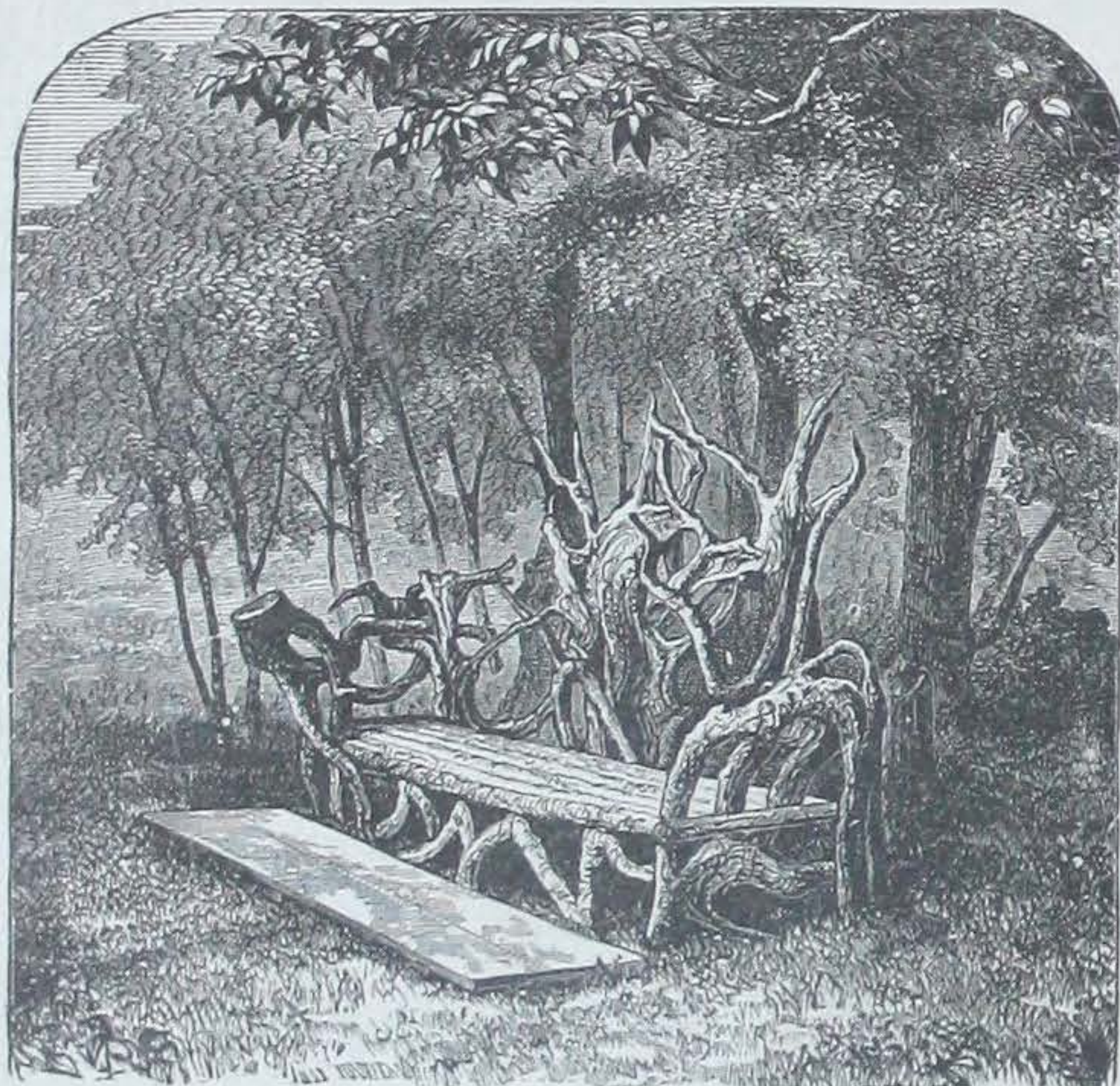
"The collection of the stuff, in the first place, is the great thing. It is only in a rocky country, like the banks of Lake George, that the stuff can be found in perfection. In the 'struggle for life,' the roots and trunks, and even the limbs of the trees, have to turn and twine themselves in all directions, and thus is produced a variety of 'twistifications' that a level country and stoneless soil would not afford. Then the mountain-streams and the washing of the waves of the lake expose the roots to view, and thus an abundance of material of the best and crookedest kind is easily to be obtained. Whenever, during the year, my helpful neighbor, or any of his men, or I, during the summer months, come across anything that will answer for our 'factory,' it is gathered and thrown into the pile at the saw-mill. For that matter, my neighbors, all around, within eight or ten miles of me, and

boards, overlapped so as to shed rain, and these boards covered with a layer of the twigs of the arbor-vitæ, fastened on with shingle-nails. These twigs are allowed to fall over the eaves and ends of the roof, six, eight or ten inches, making a very handsome fringe—at first green and then brown. The sides and ends of the summer-houses are then filled, and finished off with crooked sticks, twining roots and twisting vines, *ad libitum*, or, as cookery-books say, 'sweetened to taste.' The seats in my summer-houses are either large flat stones, or pieces of squared logs, or long seats of maple saplings, or rustic chairs. One of the most picturesque of those chairs was made from the contorted and gnarled limbs of a very ancient apple-tree."

CHAPTER XXI.

WARMING THE HOUSE.

Means of warming the house are by stoves, open grates, air heated in the basement, steam pipes and hot-water pipes. All these have their admirers and detractors. The stove, often elaborate in its construction, is woefully abused because of the bad taste generally exhibited in its form, in frequent instances amounting to hideousness, when it takes its

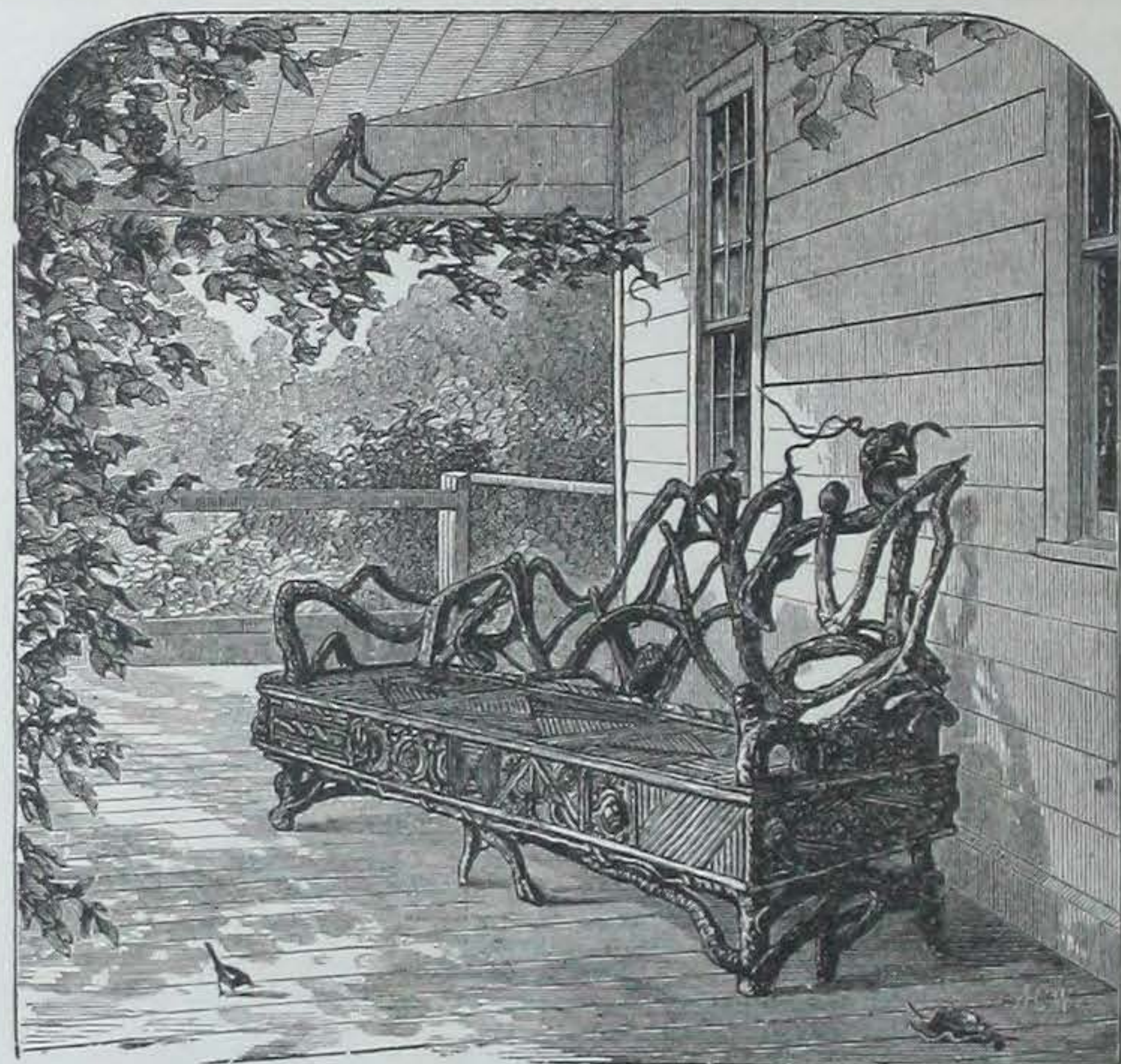


RUSTIC SEAT.

even when they go hunting in the Adirondacks, if they find anything fit for my purpose, will bring it to my place, so that when I go to the lake early in the summer, I find quite a magazine of material already gathered for my use. Also when anything fit for our purpose is found in the woods or on the banks of the streams or lake, it is marked, and obtained when needed.

"Two kinds of running vines which grow in great abundance in that region are of great service—the wild grape and the bitter-sweet. I have found the latter sometimes as large as four or five inches in diameter. Besides the natural twists of these vines, they can be interwoven and twisted into almost any shape when green. The bark of the white birch and the hemlock I often use for ornamentation, as also the knobs or warts that grow on the chestnut. The trees are perfectly hardy, so that we use any kind of wood that has the proper crook to it. There crooks assume such fantastic forms that almost all shapes can be found, with a little attention. On the table in one of the pictures is a capital representation of the ant-eater. On the sofa is the form of a crawling snake, so perfect as to have caused persons to start when they sat down by it. And the whole stand of the table is a solid piece of one tree—roots, trunk and branches. The seats of the out-door sofas are made of maple saplings, all of about the same size and growing very straight. The tops of the table and of the sofa on the piazza are made of boards, covered with strips of osier, alder and maple, interwoven into any shape that fancy may choose. The seats of the bishops and serving chairs are covered in the same manner, each piece being nailed to the boards with two or more brads. The nailing is all done with brads, finishing and cut nails—tacks and wrought nails being avoided, because of their heads, which are in the way, and of their tendency to make the stuff split.

"In my summer-houses, I make the corner or supporting posts of white cedar, sunk into the ground sufficiently far to afford a good support. The roofs are covered with rough



RUSTIC SOFA.

place as the household comforter among environments the effect of which it is apt to spoil. Moreover, as a rule, it is a failure as regards the distribution of heat, because it does not sufficiently warm the air nearest the floor of the apartment in which it is placed. Open grates, beautiful and attractively cheerful as they are, are, at the same time, costly to buy, generally wasteful of fuel, and always of labor, and scarcely adequate to supply the degree of heat which is necessary in large rooms. And who has not experienced on a particularly cold day what a delusion it is to expect to find sufficient heat coming from the heater in

the basement to the upper stories? Scientific men are enlarging upon the adaptability of gas supplied direct from the mouth of the coal-pit for cooking and heating purposes, but this is only a dream, so far. Of the remaining two means mentioned, there is force in the consideration that heating dwellings by steam is very much the reverse of economical, while where steam power is needed, as in factories, etc., it may be desirable to use it for both purposes. Hot water is unquestionably better than steam for heating a residence, because, among other reasons, it costs less for fuel, cannot cause an explosion, requires few repairs, maintains a temperature six or eight times longer than steam in pipes, after the fire is extinguished; and provides for the regulation of temperature by the simple means of increasing or decreasing the flow of water in the pipes.

These considerations lead us to give an illustration and description

of a hot-water apparatus which has been found a great accession of comfort to families, and which need not be unsightly so far as its parts appear in the various rooms of the dwelling.

The accompanying engraving shows the application of a base-burning boiler to heating by direct radiation—that is, by pipes in the rooms, from hot water. The boiler is in the basement. In each room there is a coil of radiating pipes; each coil may have valves to control the circulation of the hot water through the coil. The coils may be covered, if desired, by iron screens and marble tops. Connection is made between the boiler and radi-



RUSTIC FURNITURE

ators by means of pipes, which may be placed in the walls, or, in old houses, run through smoke flues or closets. If desired, the radiators for first floor rooms may be suspended from the ceiling of the basement, and inclosed so as to take air from the outside of the building, through a suitable duct, and allow it to pass into the rooms through registers in the floor. The connection pipes at the boiler are of 2, 3 or 4 inches diameter, according to the size of the boiler, and are reduced as they ascend and as branches to coils are taken off. The coils are usually made of one inch pipe; the branch pipes, or headers of the coils, should be larger—say $1\frac{1}{4}$ to $1\frac{1}{2}$ inches diameter according to the size of the coil.

In the upper story of the building a tank E, must be placed. This will serve for filling and for the expansion of water. The size of the tank—five to ten gallons—depends upon the size and number of coils. A conservatory may be heated in connection with the house. Hot water may be drawn in the bath-room, if desired. A large expansion tank is necessary where this is done. If the house is supplied by a head of water, an automatic ball-cock may be placed in the supply tank.

The consumption of water, when used only for heating, is very small. The circulation is noiseless. The pressure is no greater when hot than when cold. The apparatus is filled by pouring water into the expansion tank until the coils, as well as the boiler, are full. When fire is made the hot water will rise through the pipes which are attached to the top of the boiler, and pass into the top of each of the radiating coils, displacing an equal

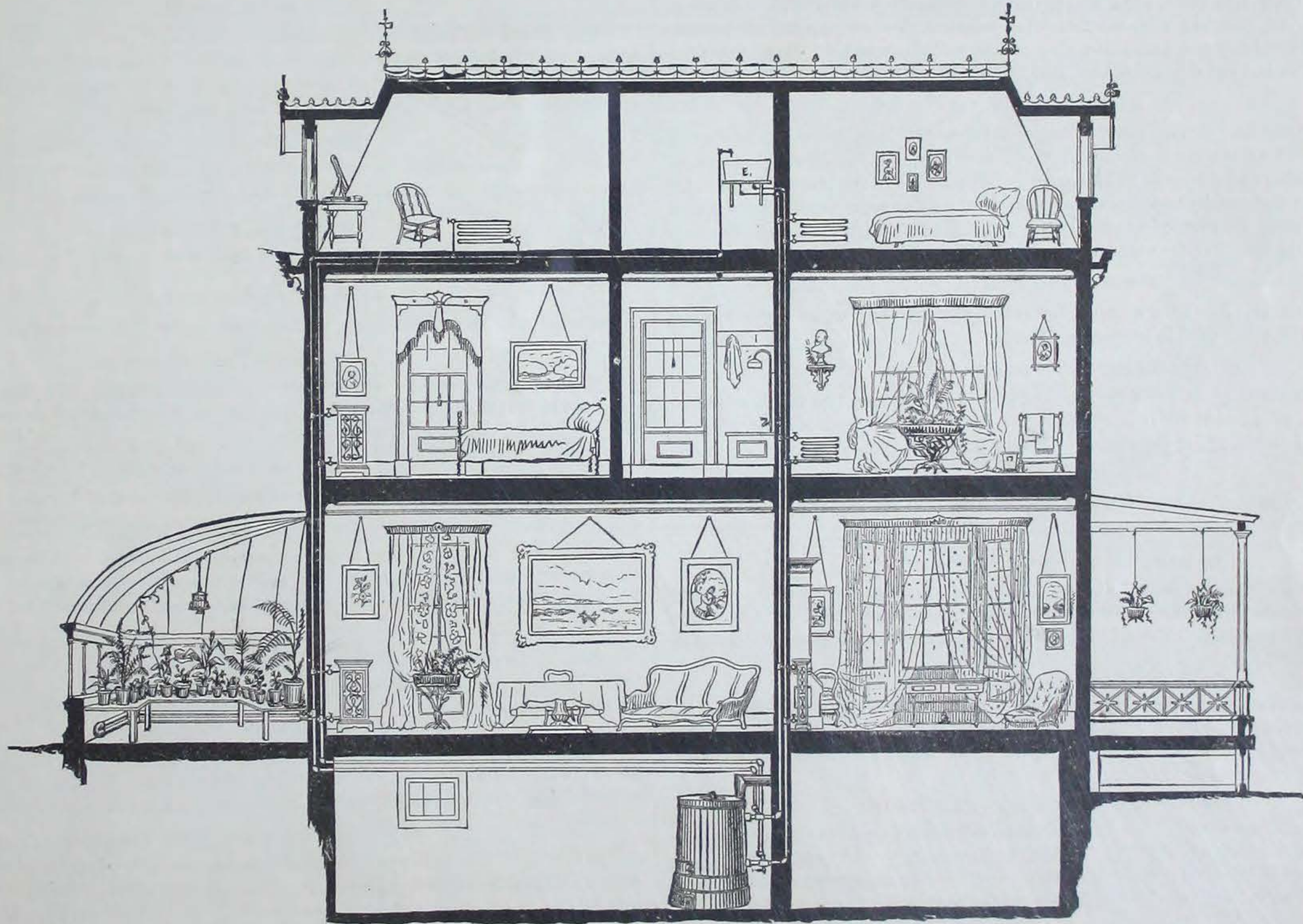
rub it up with linseed. To one hundred parts of it five parts of saturated solution of camphor in oil of rosemary are added. A dilute solution of benzole in alcohol is used for polishing.

AN EXCELLENT VARNISH

is made by softening a quarter of a pound of crude India-rubber, cut into small pieces, in one-half pound of oil of turpentine. Add two pounds boiled linseed oil, and boil for two hours over a slow fire. When completely dissolved, add six pounds of boiled linseed oil and one pound of litharge, and boil until a smooth liquid is obtained. A pigment may be combined to give it color. The varnish should be applied warm.

TO VARNISH WOODS.

It is often desirable to retain the grain of the natural wood exposed to view, and at the same time to preserve its surface from decay and give it a more beautiful appearance. These objects are effected either by polishing or varnishing. To varnish such woods a little skill is required to obtain a really good gloss, smooth as glass, upon its surface. All roughness should be carefully removed, particular care being taken not to leave any marks, especially across the grain, of the sand-paper or other material used in smoothing, and the work should be afterwards well sized either with gelatine or good glue size. The size is to prevent the absorption of the varnish in soft places, and to obtain a more even gloss. Siz-



HOT WATER METHOD OF HEATING DWELLINGS.

amount of water, which finds its way through the descending pipe attached to the bottom of the boiler. The water enters the boiler at the lower connection, is re-heated and again makes the circuit—taking up heat in the boiler and giving it off in the coils which are in the rooms. The boiler may be managed by any one who can make a fire. The coils are readily made and introduced by steam-fitters.

CHAPTER XXII.

PRACTICAL MISCELLANY.

The variety of useful matter presented in this chapter is placed at our service by the publishers of *The Decorator and Furnisher*, a New York monthly periodical of remarkable beauty and value. To the courtesy of the same gentlemen we are also indebted for the use of the plate showing the parlor of a house on Fifth avenue, New York City.

TO RESTORE COLOR TO WOODEN FLOORS.

Allow one part calcinated soda to stand three-quarters of an hour in one part slack lime, then add fifteen parts water and boil. Spread the solution thus obtained upon the floor with a rag and after drying, rub with hard brush and fine sand and water. A solution of one part concentrated sulphuric acid and eight parts water will enliven the wood after the above application. When dry, wash and wax the floor.

FURNITURE POLISH.

A furniture-maker in Berlin prepares what he claims to be the best furniture polish in use, in the following manner: Dissolve six and a half pounds of shellac in fifteen or twenty quarts of alcohol, mix with it thirty-three ounces of high-grade sulphuric acid, add seventeen ounces of camphor and sufficient alcohol to dissolve the entire thing. Finally,

ing sometimes has a tendency to raise the grain of the wood, more particularly of soft wood, especially if applied warm. Use oak varnish.

HOW TO MAKE A GOOD LACQUER.

About one hundred and twenty pounds of oil varnish is heated in one vessel, and thirty-three pounds of quicklime is put into twenty-two pounds of water in another. As soon as the lime causes an effervescence, fifty-five pounds of melted India-rubber are added. This mixture is then stirred and poured into the vessel of hot varnish. The whole is then stirred so as to be thoroughly mixed, then strained and allowed to cool, when it has the appearance of lead. When required for use, it is thinned with the necessary quantity of varnish and applied with a brush, hot or cold, preferably the former. This lacquer is useful for wood or iron and for walls; it will also render waterproof cloth, paper, etc.

FRENCH VARNISH.

The simplest French varnish is made by dissolving one and a half pounds of shellac in one gallon of spirits of wine without heat. It may be darkened by adding benzine.

CLEAN MIRRORS

with soft paper, not cloth. We have seen this advice repeated numberless times, and yet cloth is constantly used, with its usual accompaniment of lint and trouble.

TO STAIN CHERRY LIKE MAHOGANY

dip it in a heated solution of logwood chips, digested for twenty-four hours or more in vinegar or acetic acid. The dipping should continue until the proper color is obtained.

KEEP THE CELLAR CLEAN.

The cellar not unusually opens into the kitchen; the kitchen is heated and the cellar is not. Following natural laws, the colder air of the cellar will rush to take the place of the

warmer, and, therefore, lighter air of the kitchen. This would be well enough if the cellar air was pure; but often it is not. In this case the cellar should be thoroughly cleansed. A day should be taken to throw out and carry away all injurious accumulations. Brush down the cobwebs, and give the walls and ceilings a good coat of whitewash. This will sweeten the air in the cellar, the parlor and the bedrooms, and may save the family from sickness.

TO CLEAN DULL GOLD.

Eighty grammes calcium hypochlorite, eighty of sodium bicarbonate, and twenty sodium chloride are mixed in three quarts of distilled water. It is then kept for use in corked bottles. Goods to be cleaned are put in a basin and covered with the mixture, after a time they are taken out, washed, rinsed in alcohol, and dried in sawdust. The articles then look good as new.

EBONIZING STAIN

for wood is made by boiling in an old iron pot or pan over a slow fire the following ingredients until they are dissolved. One quart strong vinegar, one half-pound extract of logwood, two ounces of green copperas and one ounce of nutgall. Let the mixture cool. Next dissolve—it will require a day or more—four ounces of steel filings in one pint of strong vinegar, and add half a pint to the first mixture. Stain, fill in and polish as usual.

POLISH FOR GRATES.

A burned or rusty iron grate, after having been thoroughly washed with a hot and strong alkali, can be polished with the following mixture: To one pound of asphalt, which has been melted in a pot, add half a pint of hot boiled linseed oil, to which, after being thoroughly mixed and slightly cooled, add one quart of turpentine.

TO MAKE CRACKLE GLASS.

To produce "crackle" surface glass, a French inventor, M. Bay, covers the surface of a sheet of glass with a paste made of some coarse-grained flux, or easily fused glass, placed on a table in a muffle, and subjected to a high temperature. When the coating is fused the sheet is withdrawn and rapidly cooled, and the superficial coating separates itself and leaves the irregular surface. By protecting some parts of the glass from contact with the flux, designs and lettering may be left in smooth glass.

A MOULD FOR METAL.

Plaster of Paris is made hard enough for mould for metal by using about ten per cent. of alum in the water used in mixing the plaster.

AN ATTACHMENT FOR WINDOW-CURTAINS,

to keep them from blowing out when the window is open, consists of two pieces of chain, of suitable length, attached to the lower edge of the curtains, near opposite sides, and two hooks on the window-casing for the chains to be attached to.

TO POLISH MAHOGANY.

Mahogany may be polished by rubbing first with linseed oil and then with a cloth dipped in very fine brick-dust.

TO MAKE AN OLD GRATE LOOK NEW.

Take a few cents' worth of asphaltum and mix it with equal quantities of benzine and turpentine. When the mixture is of the consistency of paint apply it with a brush, and the grate will look new again in a short time. The coal-scuttle can be treated in the same way if desirable.

ACCESSIBLE DEODORIZERS.

A pail of clear water in a newly-painted room will remove the sickening odor of the paint. Coffee pounded in a mortar and roasted on an iron plate, sugar burned on hot coals, and vinegar boiled with myrrh, and sprinkled on the floor and furniture of the sick-room, are excellent deodorizers.

TO PREVENT SILVER-WARE FROM TARNISHING.

Paint the solid silver-ware or plated goods with a soft brush dipped in alcohol, in which some collodion has been dissolved. The liquid dries immediately, and forms a thin, transparent, and absolutely invisible coating upon the silver, which completely protects it from all effects of the atmosphere, etc. It can be removed at any time by dipping the article in hot water.

CEMENT FOR PETROLEUM LAMPS, ETC.,

and adapted for attaching the brass works to petroleum lamps, is made by boiling three parts resin with one part of caustic soda and five of water. The composition is then mixed with half its weight of plaster of Paris. It sets firmly in half to three-quarters of an hour. It is said to be of great adhesive power, not permeable to petroleum, a low conductor of heat, and but superficially attacked by hot water. Zinc white, white lead, or precipitated chalk may be substituted for plaster, but hardens more slowly.

TREATMENT OF A VACATED HOUSE.

After a tenant has left a house it should be immediately swept. Allow the water to run several minutes in all the sinks, basins, and water-closets. See that no particle of vegetable matter is left in the cellar. Leave a window in every room open. Scatter a little chloride of lime in the cellar, and place some in a saucer in the bath-room and kitchen.

TO FIT A KEY.

Hold the end of a key in a flame until it is thoroughly smoked, introduce it carefully into the keyhole, press it firmly against the opposing wards of the lock, withdraw it, and the indentation on the smoked part of the key will show exactly where to file.

FOR PAINTING ON LIGHT WOODS.

Prepare the surface with one coating of two parts of bleached shellac dissolved in nine parts of alcohol. Give this two or three days to dry, and the natural color of the wood is preserved, while it effectually prevents the oil in the colors from spreading.

MOths IN CARPETS.

After thoroughly cleaning and airing, scatter powdered camphor plentifully between the lining and the carpet, particularly about the outer edges and the dark corners, where the moths love best to nest. When a house is to be closed for the summer, several folds

of newspaper laid over the edges will add greatly to the protection of the carpets, as the odor of the printing ink employed is particularly offensive to moths. Many persons take no other precaution in the case of woollens than to beat them thoroughly, wrap them in newspapers, and lay away. Moths may be removed from a carpet by wringing a coarse towel in clear water, spreading it smoothly on the carpet, ironing dry with a hot iron and repeating this wherever the moths are believed to be. The heat and steam will destroy the moths.

A PORTABLE MEAT-SAFE.

A barrel shaped case of gauze, within which the meat is to be suspended, is the best portable meat-safe. It should be hung by a hook from the ceiling, or a beam, etc. This practically bars out flies, mice, etc.

TRANSPARENT PAPER

may be made by dipping good paper in a solution of castor-oil in alcohol. The paper becomes quite transparent after the evaporation of the alcohol.

TO REMOVE ODORS FROM BOTTLES, ETC.

Clean the vessel thoroughly by scalding, scouring or shaking with shot, coarse sand, etc., then wash with a mixture of black mustard and warm water. Chlorate of soda will frequently answer the purpose, or a solution of permanganate of potassium, followed by diluted sulphuric acid.

TO CLEAN MARBLE.

Mix powdered chalk and pumice-stone, each one part with two parts of common soda, into a paste with water, and rub it thoroughly on the marble; or mix quicklime and strong lye to consistency of milk, and lay it on the marble for twenty-four hours. In both cases wash off thoroughly with soap and water.

VARNISH FOR WHITE WOODS.

Dissolve three pounds of pure and white bleached shellac in one gallon of spirit of wine; strain, and add one and one-half more gallons of spirit.

TO CLEAN OIL COLOR BRUSHES.

These may be better cleaned with oil than with soap and water or turpentine. It leaves them soft and pliable.

IN OUTSIDE PAINTING

in colors, the ochres, India and Venetian reds, burnt and raw umber are all reliable.

TO MAKE A CLOCK-STAND.

Cover a round, square, or other shaped block of wood, with plush or velvet. A small braid over the edges and a monogram or medallion painted or embroidered on the front is all the ornament necessary.

TO RENOVATE GILT FRAMES.

Don't have them regilded, but give them a good coat of bronze.

CARPET CLEANING AT HOME.

Sprinkle a pint of coarse bran over one-half the carpet of the room, the bran being dripping wet, and then, beginning at the wall, sweep the bran over the other half of the floor. Avoid walking on the bran. The bran absorbs the dust and takes it out of the carpet.

PARLOR DOOR-MATS.

Mats to cover the sills of parlor doors may be made from the raveled threads of a carpet. The thread is kept as long as possible, and has somewhat the effect of a variously colored hair mat.

TO DRIVE MOTHS FROM UPHOLSTERED WORK.

Sprinkle the upholstered parts thoroughly with benzine. The benzine is put in a small watering-pot, such as is used for sprinkling house plants. It does not spot the most delicate silk, and the unpleasant odor passes off after an hour or two in the air.

TO REMOVE INK-STAINS FROM CARPETS.

While the ink is still wet take clean blotting-paper or cotton batting and carefully soak up all that is possible. Then pour a little sweet milk on the carpet or other woolen article, and sop it up with clean cotton batting. This must be done several times, each time soaking the milk up with fresh batting and using fresh milk. When the milk is removed wash the spot with clean soap-suds and rub dry with a clean cloth. If the ink has become dry the milk must remain on longer and be used oftener. With perseverance, however, it will all disappear.

TO REMOVE OIL-STAINS ON CARPETS.

Scatter corn-meal upon them. The meal will absorb the oil. Also, the application of a hot iron through a heavy sheet of blotting-paper will have the same effect.

TO DARKEN MAHOGANY.

A solution of bichromate of potash is often used for darkening mahogany. It converts the light-colored mahogany to the tint of the old mahogany furniture.

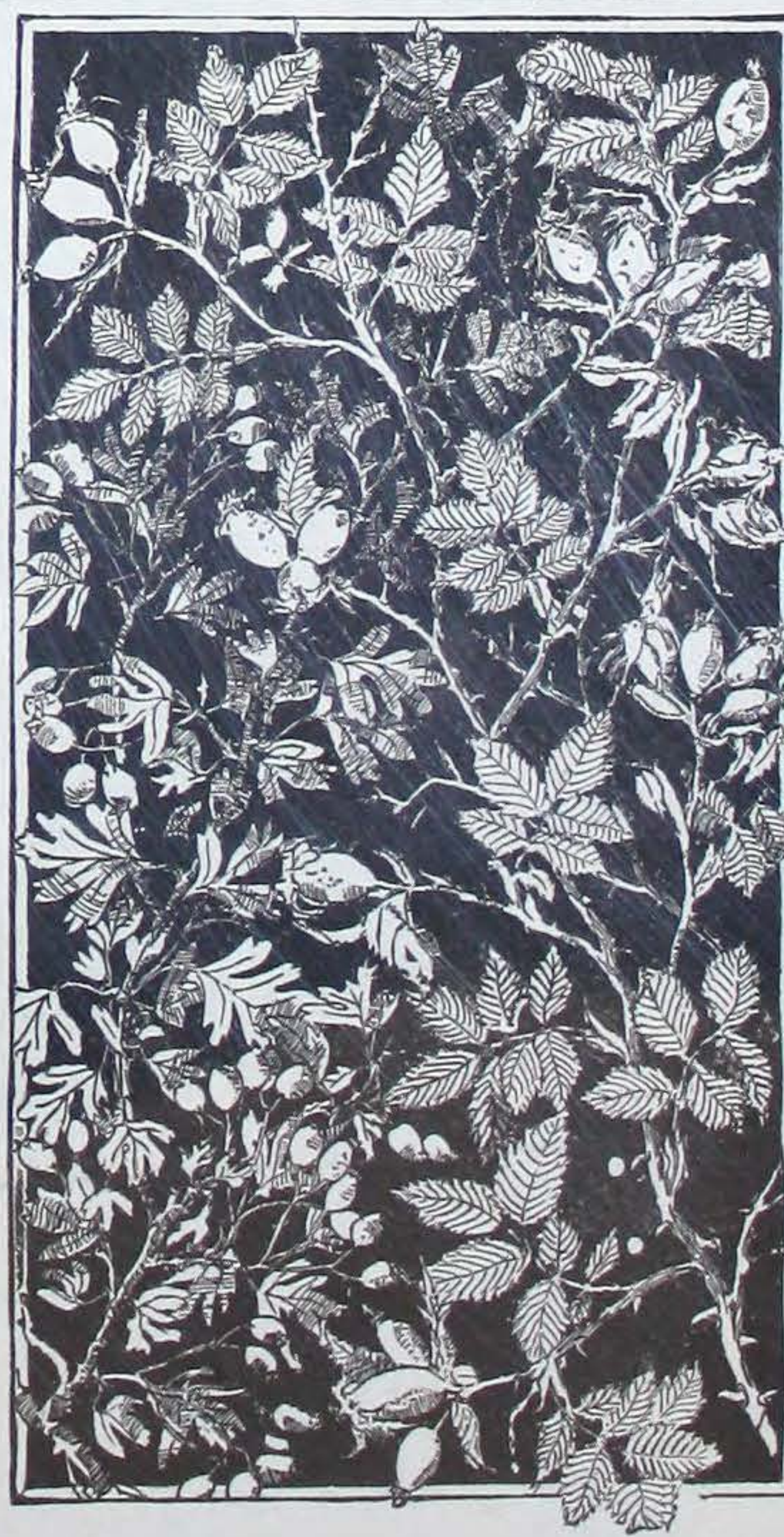
THE FULL-PAGE ILLUSTRATIONS, AND CONCLUDING WORDS.

With but one exception we appropriate the supplementary pages to the presentation of designs for decoration. Most of these are simple, and all are selected because of their superiority as works of art. The strikingly original character of the selection will, moreover, commend it to the appreciation of the refined and well-informed. Ladies will thank us for the page of window-hangings, which, like many other pictures in this work on furniture and decoration, have perhaps their chief value rather in what they suggest than as subjects to be slavishly copied.

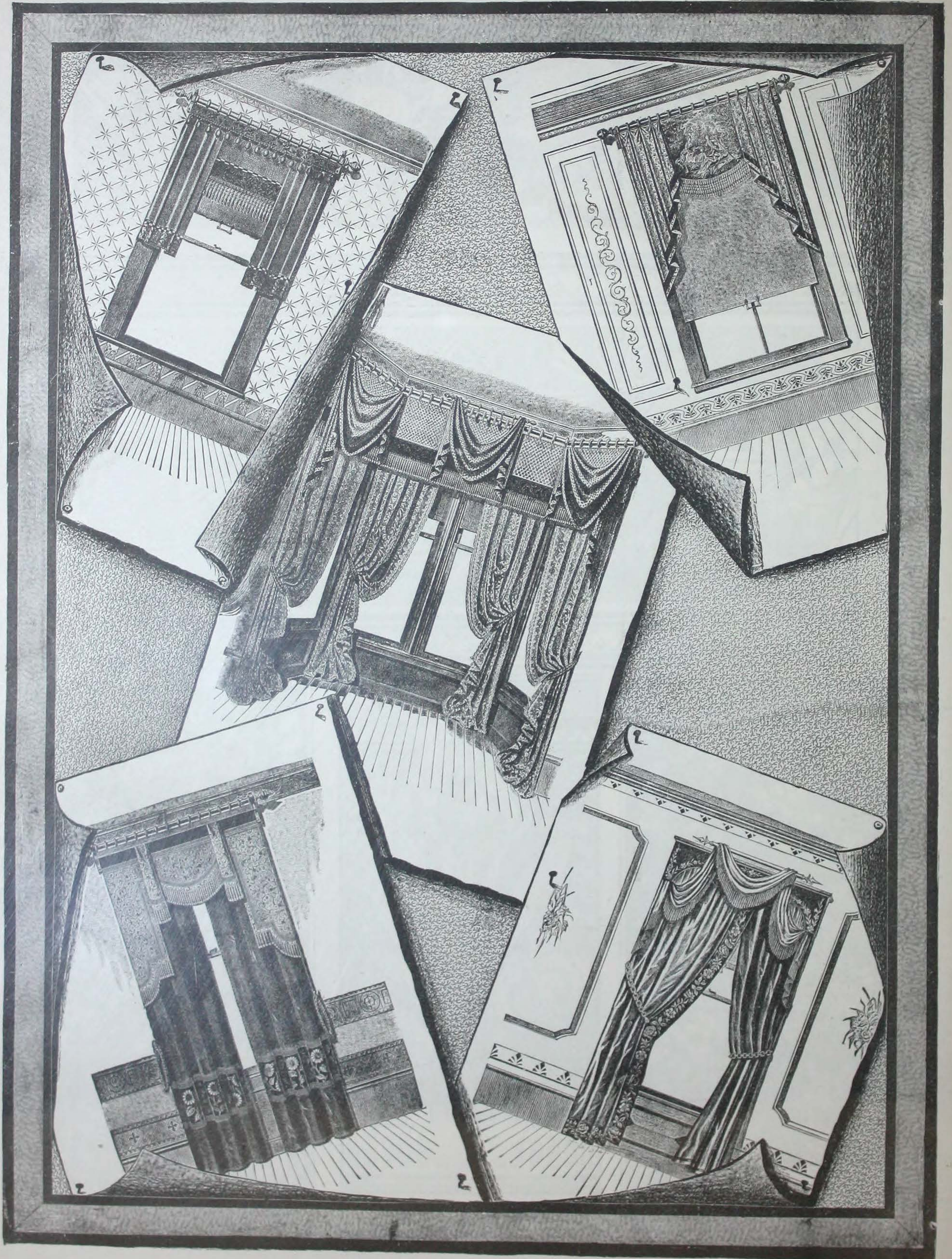
The final words of a book like this, as it seems to us, must necessarily take the form less of pleasure that a work is completed than of regret that a fascinating occupation ceases. However humble the effort now closed may be, he who pens these concluding words is conscious that a leading motive in its execution has been, with sincere and rightly intentioned but possibly sometimes erring loyalty to the principles of beauty in form and color, to excite and stimulate in the persons who acquaint themselves with these pages, that admiration for whatsoever things are lovely which is the crowning endowment of human nature.



SUGGESTIONS FOR DECORATORS AND CARVERS.



PRACTICAL DESIGNS FOR CEILING AND WALL DECORATION.



STYLE OF DECORATION AND HANGINGS FOR WINDOWS.

SUPPLEMENT.

The purpose of this Supplement is shown sufficiently in the view of its contents given below. A form of specifications, complete to every detail, is a new thing to be found in a book, and one which will augment the value of this work very greatly to many persons. Related to this is a bill of quantities, of scarcely less use in building transactions. It is the work of an adept in arrangement and the art of showing a great deal of detail in a small and most convenient form. Every reader buying or selling, or intending to buy or sell real estate, will be pleased to find a satisfactory and trustworthy statement of the law on the subject. The various titles aptly introduce sets of forms fuller and more numerous than have appeared before in any work other than a law book exclusively. Introductory chapters may be relied upon as safe statements of the general principles of the law on the different subjects treated, and the forms will be found serviceable in every State and Territory of the Union. Believing that the Supplement will enhance still further the great popularity of the work of which it forms a part, the publisher submits it to the reader with the greatest confidence.

CONTENTS OF SUPPLEMENT.

SPECIFICATIONS	Mason Work, Carpenter, Tinner, Slater, Plumber, Painter.
CONTRACT FOR BUILDING.....	(Full Size and Ruled.)
BOND.....	(Full Size and Ruled.)
BILL OF QUANTITIES.....	Mason's Estimate, Carpenter's Work, Slater's Work, Tinner's Work, Plumber's Work, Painting, Miscellaneous Expenses.
AGREEMENTS AND CONTRACTS.....	Abstract of the Legal Principles involved in the Subject—Agreement to Sell Land—Agreement for Warranty Deed used in the Western States—Contract to Convey Property—Contracts for Property—Contract to Exchange Property—Party-wall Agreement—A Brief Building Contract
DEEDS.....	The Law Relating to Deeds—Abstract of Particular Laws Relating to Deeds in the United States and Canada—Quit-claim Deed—Warranty Deed—Warranty Deed, Full Covenant.
AGENCY.....	The Law of Agency and Power of Attorney—Form of Power of Attorney—A Short

AGENCY—(Continued)	Form—Power to Receive a Debt—Revocation of Power of Attorney.
BONDS	Introductory Statement—Short Form of Bond—Bond Containing All Clauses—Condition of a Bond to Convey Land—Bond with Sureties—Assignment of Bond.
MORTGAGES	The Law of Mortgages—Memorandum of Application for a Loan—A Promissory Note, to be secured by Mortgage—Short Deed of Mortgage in use in Indiana—Mortgage, Time of Payment Printed—Mortgage Deed, with Power of Sale, and Release of Dower and Homestead—Mortgage, with all Clauses—Assignment of Mortgage—Another Form of Assignment—Release—Satisfaction of Mortgage—Sale by Mortgagee under Power of Sale—Notice of Mortgagee's Sale—Affidavit of Sale.
LANDLORD AND TENANT.....	Valuable Statement of the Law of the Relations of Landlord and Tenant—A Lease—Lease, Furnished House and Apartments—House Agreement and Mortgage—Landlord's Agreement not to Underlet—Tenant's

LANDLORD AND TENANT—(Continued).....	Agreement not to Underlet—Assignment of Lease—Surrender of Lease—Landlord's Agreement—One Month's Notice to Quit—Notice to Quit—Tenant's Notice of Leaving—Notice to Quit on Non-payment of Rent—Notice to Quit or Pay Double Rent—Rent Receipt.
ARBITRAMENT AND AWARD.....	Preliminary Explanations—Form of Submission to Arbitration—Arbitrator's Oath—Award of Arbitrators.
UNITED STATES HOMESTEAD LAW.....	All its provisions stated in simple language.
LIENS	Definition, etc., of Lien—Certificate for Work or Labor—Release and Discharge of Mechanic's Lien.
SALES OF REAL PROPERTY.....	A Compend of Valuable Advice to Buyers and Sellers of Real Estate.
WILLS	The Law of Wills—Form of Will—Will for Real and Personal Estate—A Codicil to a Will—Form of Will Devising Property to Trustees for Certain Purposes—Executor's Bond.

SPECIFICATIONS

Of Work and Materials used and required to Build, Erect, and Complete a House
with on Lot No. for Mr. in accordance
with plans and the within written specifications.

MASON WORK.

DIMENSIONS.—Refer to the plans and the figures thereon. The plans must be accurately followed according to scale and the figured dimensions.

EXCAVATION AND FOUNDATION.—Excavate to the depth and form marked on plans. Start the foundation inches below the cellar floor on a good base course made with and run the walls up to the ground line inches thick, and from there inches thick; build the piers as shown on plans x inches, the piers for the chimneys properly bound together, using no bats except for closers, laid with close joints, and with good lime and sand mortar. All to be good hard burned brick and stone lime.

LATH AND PLASTERING.—Lath, scratch coat, brown and hard finish the stories. All whitewashing to be done in two good coats.

CENTER PIECES.—Put up neat center pieces of approved design in rooms; the center pieces not to cost less than dollars.

CORNICES.—Put up ornamental cornices as shown in the drawings.

PLASTER ARCHES.—Put up arches in a tasteful and substantial manner, as shown in the drawings.

CHIMNEYS.—Build the chimneys as per plans, and properly core them, putting in heater pipes where shown, the chimneys to be built of best hard burned brick; turn arches over fire-places and under hearth-stones.

HEARTHES.—To be of bedded in cement mortar over brick trimmer arches.

DRAINS.—Provide and lay to the proper grade with drain pipes, where shown on plans, pipes to be laid below frost, made tight and connected with soil pipes, cesspool, or sewer, and to be trapped in a thorough manner. Vitrified pipes to carry rain water from the leaders to the cistern to be laid in a proper manner, made tight, to have strainers of galvanized iron, and to be connected with all leaders from roof, and with cistern or with tanks as the owner may direct.

CISTERN.—To be built in a proper manner feet in diameter and feet deep, to be lined with inches brick work, laid in cement mortar; bottom to be paved with brick laid on edge in clear sharp sand, and to be thoroughly grouted with cement; arch

over and form a circular manhole, and cover with substantial flag. The cistern is to be provided with a good charcoal filter, to have an overflow, and to be connected with a pump and vitrified pipes, and it is to be cemented in a thorough manner.

CESSPOOL.—Excavate for and stone up cesspool with good dry rubble feet in diameter and feet deep. Provide a manhole, and cover with rough flag and connect with drain.

FINALLY, concrete the cellar floor; cement the foundation from the outside; put inch sills to all cellar windows; build areas around cellar doors and windows, the steps leading to the cellar to have inch flagstone steps and brick risers. Build piers for the piazza columns inches square, set feet below the ground. Remove all surplus earth, rubbish, etc., and level and grade around the building according to directions given by the owner.

All the work to be done in a good and workmanlike manner.

CARPENTER.

DIMENSIONS.—For dimensions refer to the plans and the figures thereon. Follow the drawings accurately according to their scale. Preference is given to figured dimensions over scale.

HEIGHTS OF STORIES.—Cellar feet inches in clear; first story feet inches in clear; second story (main house) feet inches in clear; second story (kitchen extension) feet inches in clear; third story feet inches in clear.

TIMBERS AND FRAMING.—Girder x inches; sills x inches; posts x inches; ties and interties x inches; plates x inches; hip and valley rafters x inches; other rafters x inches, placed inches from centers; first and second floor beams x inches; third floor beams x inches, all placed inches from centers, having two rows of truss bridging to each span of x inch tightly cut in and thoroughly nailed with tenpenny nails. Brace the building in the most thorough manner with x inch joists, braced from sill to angle; outside studding around windows to be x joists; filling in timbers x inches; sills of piazza x inches; floor timbers x inches, placed feet from centers; plates x inches, rafters x inches, placed feet from centers.

In the put down
....., placed inches from centers, to lay the floor on, floor to be All the framing of the entire building to be done in the best manner, and all timbers to be free from shakes, splits, or dry rot, and the building to be raised straight, plumb, level, and true; all timbers to be except floor beams, such to be

ROUGH BOARDING.—Cover the entire frame with boards, set at an angle of 45 degrees, and each length bracing to the opposite direction, and thoroughly nail with tenpenny nails.

PAPER.—Cover the entire frame and roof with a good quality paper, stripped with mason's lath every inches opposite the studding.

WINDOW FRAMES.—Build and set window frames as shown in the plans and elevations, with inch sills, except in rear, which are to be inches, with plank jambs; inch outside casings as per plans; inch sash on first story front; elsewhere inch sash;

glazed with _____ on _____ story; elsewhere single thickness; hang the sash with good axle pulleys and strong hemp cord, fastened with the most approved fastenings, all to have cast iron weights; cellar windows to have sash with _____ lights wide, _____ inch sash, hung with _____ inch butts, to fasten when open and shut, with a hook and staple, sash to be hung from the top. Attic windows to have _____ inch sash, hung _____

CORNICES.—Build the cornices and gables as shown on the elevations, with all details fully and faithfully carried out. Form good and capacious gutters, and make them so as to drain dry.

MANSARD ROOF.—

VERANDAS.—Build and put up the verandas as per drawings, in the best manner, with all their details fully and faithfully carried out. Lay the floors with narrow _____ inch flooring, laid in lead paint, blind nailed, smoothed off and finished with a nosing and _____ moulding. Build the steps of _____, _____ inch treads, _____ inch risers, _____ inch strings; strings and steps finished in the usual manner. Cut work underneath fascia to have a cut pattern and a base; build the columns of _____ inch, _____ the roof to be _____; rafters to be _____

SIDINGS AND CLAPBOARDING.—Cover the entire sides and ends with _____ laid not more than _____ inches to the weather, all properly blind nailed, and all heading joints to be neatly smoothed off. The vertical siding to be of narrow tongued and grooved _____ inch, dressed _____ stuff, to have _____ battens nailed over joints.

SHINGLING.—The whole of the _____ to be covered in the best manner, with best _____ shingles, laid not more than _____ inches to the weather; to be properly nailed to _____ strips, with good _____ metal nails; strips to be nailed to _____ with twelvepenny nails. All hips and valleys are to be flashed with best _____ and the whole is to be warranted water-tight.

FLOORING.—Lay the floors of the _____ story with narrow _____ flooring, free from all defects, blind nailed, and made smooth; _____ to be laid with _____ inch _____ flooring; _____ floor to be laid with _____ inch _____; all thoroughly nailed with tenpenny nails.

PARTITIONS.—To be set where shown on plans as follows: Set main partitions with _____ x _____ inch joists, and other partitions with _____ x _____ inch wall strips; all to have the studs double at the doors and windows, and to be set on top and bottom joists, well braced and bridged. To be set straight, plumb, true, and thoroughly nailed. Do all blocking for cleats, bases, etc. All studs to be _____ inches from centers.

STAIRS.—Build the main flight of stairs as per plans of _____, with _____ inch strings, and _____ inch treads and _____ inch risers; steps to be front and back tongued, with returned and moulded nosings, the string to be moulded in a tasty manner; the wall string is to correspond with the base; support on _____ x _____ inch timbers bracketed to each tread, set _____ inch fancy _____ newel, _____ x _____ inch moulded hand-rail, and _____ inch fancy _____ balusters; newel, rail, and balusters to be of seasoned _____, oiled two coats and made smooth. Stairs from _____ to _____ to be built of _____, neatly finished, and to have newel, rail, and balusters of _____ as shown in drawings. Stairs leading to _____ to be a _____, _____ inch string, and _____ inch steps with _____ inch risers.

CASINGS.—In the first story put casings as shown on details, _____ inch base, _____ inch thick, _____ inch moulding, base scribed to the floor. In second story put down plank jambs, _____ inch plain casings and plain bead with _____ inch back-band moulding, _____ inch base, _____ inch thick, and _____ inch moulding.

The windows in the _____ to be finished with framed and moulded panel-backs to match doors; all other windows to have neat stool and apron-finish. All door jambs are to be rabbeted and beaded on edges.

WAINSCOTING.—Walls of _____ to be wainscoted _____ feet high, with beaded _____ battens, and to be capped with neat cap.

DOORS.—Hang all doors as follows: Hang passage doors with _____ butts, and closet doors with narrow _____ inch butts. All passage doors in first and second stories to have _____ locks and _____ furniture; for closets put _____ locks, same furniture; run the sliding-doors between _____ with _____ inch sheaves, run on brass way _____; sliding-doors to have _____ glass in the upper panels, _____ lights to each door. Front and vestibule doors to have _____ glass, made as per elevation, hung with _____ x _____ inch butts, acorn tips; to be fastened with flush bolts, _____ inch, and locks and night-latch attachment, and each lock to have two keys. In _____, put _____ locks, _____ furniture. Outside doors for _____ to have _____ locks, two sliding-bolts to each, doors to be _____ inches thick, hung with _____ x _____ inch butts. Front, vestibule, and sliding-doors to be _____ inches thick; passage doors _____ inches thick; closet doors to be _____ inches thick. All doors to be paneled both sides, except closet doors; these to be paneled on one side.

BLINDS.—All windows to have outside rolling blind shutters, hung and fastened in the most approved manner, painted three coats of pure lead color; color to be chosen by the owner. Inside blinds to be in _____, made _____

BELL.—Put up the gong and bell for the front door to _____, with copper wire in zinc tubes, etc., all complete.

WASH-TUBS to be constructed of 2-inch plank, rabbeted and put together with white lead joints, to have hinged lids; these tubs to be _____ inches deep.

SINK to be cased with narrow beaded _____ battens, to have door properly hung; ceil up splash back, and cap the same with neat cap; place drip-board, etc., complete.

WASH-BOWLS to be cased with narrow beaded _____ battens, to have door and closet under.

BATH-ROOM.—Walls to be wainscoted _____ feet high, with narrow beaded _____ battens, capped with a neat cap; bath-tub to be cased in a most approved manner of _____; and water-closet to be fitted up with seat, riser, and mitre-clamp flap, hung with brass butts.

TANK to be made of 2-inch plank where shown, _____ long, _____ wide and _____ high, properly framed and braced, and to be lined with _____ by the plumber.

CLOSETS to be shelved in the best manner, shelves to be left loose; all closets to have an average of _____ shelves, etc., all complete.

PANTRY to have countershelf and _____ shelves above; closet for barrel of flour, with a lid in countershelf, and put therein also _____ dovetailed and well glued drawers, and as many hooks as required.

HARDWARE, ETC.—All doors throughout to be furnished with good _____ locks, except otherwise specified, and to have bolts and keys, and all doors over 7 feet 6 inches high to have three butts. The sliding-doors to be run on _____ track and approved slot sheaves. Provide and fit up fronts, knobs, etc., for all doors to correspond with their respective localities; the closet-doors, except otherwise specified, to have approved catches; all drawers to have pulls, locks, etc., all complete.

MISCELLANEOUS.—Put a scuttle in the roof of main house, accessible from the hall, _____ fasten down with four small hooks and staples, and provide a neat step-ladder thereto, made of _____ inch pine; all complete.

Partition off the cellar, as shown on plan, with rough hemlock boards, properly put up and nailed, and provide batten doors for each part, properly hung and fastened with hasp and staple; all complete.

Build a coal-bin in the cellar.

Put down hard wood saddles, with moulded edges, to all doors.

Put down mitred borders to all hearthstones.

MANTELS of a neat pattern, corresponding with their respective localities, and of to be put up in a thorough manner, in ; the cost of the same not to exceed \$, and to be approved by the owner. Put in the kitchen: neat pine mantel.

Do all the work set forth in the drawings to their true extent and meaning, in case of any omission in this specification; all of the work to be done in a good and workmanlike manner; all materials used, not specified, to be good, merchantable pine.

TINNER.

Cover the different roofs, window caps, scuttle, gutter (except otherwise specified), flashings, etc., in the best manner, with the best brand of lead-plate charcoal tin, all well locked, nailed, and soldered, and the whole work warranted water-tight. Run the water from the gutter to the ground, through inch leaders, where shown; all leaders to be firmly secured to the building.

Do all other tinning required to make the job complete.

SLATER.

The roofs where shown are to be covered with best slate, laid with a proper lap; each slate to be nailed with two galvanized iron nails on inch strips; strips to be from centers, nailed with nails to . Cover the valleys, hips, ridges with in the best manner. All slating is to be warranted perfect for the term of year

PLUMBER.

SOIL PIPE.—Soil pipe to be a inch cast-iron pipe; connected with drain pipe and run up above roof; cap with ventilator, and connect with ; to be properly caulked with lead and strongly secured to the building. All traps are to have lead vent pipes run up to the outlet pipe.

SUPPLY PIPE.—Furnish a inch lead B pipe, connect with attic tank, and with boiler in the kitchen; the tank is to be lined with lbs. lead, and to have overflow.

WASTE PIPE.—Waste pipes for sink, wash-tubs, water-closet, bath-tub, etc., to be lead pipe. Branch-wastes to be lead pipe; all properly connected, etc.

BOILER.—To be a gallon of best construction, connected with water-back of range through a double A lead pipe and brass couplings; pipes to be left ready for connections.

RANGE.—Range with water-back to be furnished by the owner, properly put up and connected by the plumber, etc.; all complete.

SINK.—Sink to be inch x inch x inch galvanized cast-iron, supplied with hot and cold water through $\frac{3}{8}$ -inch lead B pipe and brass draw-cocks, to have lead waste, and to be properly trapped with S trap.

PUMPS.—Pump to be a pump; connect with cistern and well through lead B pipes, provided with stop-cocks, one to each pipe, and connect with attic tank through lead B pipe, and run tell-tale back from tank to sink.

WASH-TUBS.—Wash-tubs to be supplied with hot and cold water through lead B pipes, and brass draw-cocks, to have main and branch-wastes, and to be properly trapped with S traps.

WASH-BOWLS.—Wash-bowls to be selected by the owner, to have countersunk tops and surbases, supplied with hot and cold water through inch B lead pipes and -plated draw-cocks, plug and chain; to have inch lead-wastes, properly trapped with S traps and connected, etc.

WATER-CLOSET.—Water-closet to be of approved pattern, with drip tray and shut-off cock to regulate the water; to be set up in a complete manner.

BATH-TUB.—Bath-tub to be a tub, tinned and planished, supplied with hot and cold water, to have plated draw-cocks, plug and chain, and also shower-bath attachment; provide and fit up lead-waste and S trap therefor, etc.; all complete.

FINAL.—Provide and fit up all necessary cocks, plugs, lead pipes, etc., required to make a complete job; all pipes must be graded so as to drain dry, and the whole of the work to be done in a workmanlike manner, and in perfect condition; and to be warranted perfect for the term of year

PAINTER.

Paint the entire outside with two goods coats of oil in lead paint, all to be executed in delicate tints; tints to be chosen by owner. The tin-work and chimney are to be painted with three good coats of oil in lead paint. All joints, splits, etc., to be carefully puttied up, and all knots to be killed with shellac before the paint is applied.

For the inside wood-work in first and second stories, put two coats of oil in lead paint; grain the kitchen in and the in . All hard wood-work to be oiled and made smooth. All other inside wood-work in stories to be painted two good coats in delicate tints. All grained and hard wood-work is to be varnished in the best manner with varnish.

The painting is to be done in a good and workmanlike manner, and in accordance with the directions of the owner, and as soon as the other work will permit.

The blinds to be painted as directed above.

The above Specifications are hereby made part of the contract, by mutual consent.

In Witness Whereof, the contracting parties have affixed their signatures this day of 188 .

Witnesses:



[Form Approved by The Co-operative Building Plan Association, New York.]

CONTRACT FOR BUILDING

made this _____ day of _____ in the year one thousand eight hundred and eighty _____

Between

of the First Part, and

of the Second Part

FIRST.—The said *part* _____ of the second part *do* _____ hereby for _____ heirs, executors, and administrators, covenant, promise, and agree to with the said *part* _____ of the first part, _____ executors, administrators, or assigns, that the said *part* _____ of the second part, _____ executors or administrators, shall and will, for the consideration hereinafter mentioned, on or before the _____ well and sufficiently _____ and finish the new Building

agreeably to the Drawings and Specifications made by _____ and signed by the said parties and hereunto annexed, within the time aforesaid, in a good, workmanlike, and substantial manner, to the satisfaction and under the direction of the said

_____ to be testified by a writing or certificate under the hand of the said _____ and also shall and will find and provide such good, proper, and sufficient materials, of all kinds whatsoever, as shall be proper and sufficient for the completing and finishing all the _____ and other works of the said Building mentioned in the _____ Specification for the sum of _____

And the said *part* _____ of the first part *do* _____ hereby, for _____ heirs, executors, and administrators, covenant, promise, and agree, to and with the said *part* _____ of the second part, _____ executors and administrators, that the said *part* _____ of the first part, _____ executors or administrators, shall and will, in consideration of the covenants and agreements being strictly performed and kept, by the said *part* _____ of the second part, as specified, well and truly pay, or cause to be paid, unto the said *part* _____ of the second part, _____ executors, administrators or assigns, the sum of _____

Dollars, lawful money of the United States of America,

in manner following:

Provided, that in each of the said cases a certificate shall be obtained and signed by the said _____

CONTRACT FOR BUILDING.—Continued.

And it is hereby further agreed by and between the said Parties :

FIRST.—The Specifications and the Drawings are intended to co-operate, so that any works exhibited in the Drawings, and not mentioned in the Specifications, or *vice versa*, are to be executed the same as if they were mentioned in the Specifications and set forth in the Drawings, to the true meaning and intention of the said Drawings and Specifications, without any extra charge whatsoever.

SECOND.—The Contractor, at his own proper cost and charges, is to provide all manner of materials and labor, scaffolding, implements, molds, models, and cartage of every description, for the due performance of the several erections.

THIRD.—Should the owner at any time during the progress of the said Building request any alteration, deviation, additions, or omissions from the said Contract, he shall be at liberty to do so, and the same shall in no way affect or make void the Contract, but the cost of the same will be added or deducted from the amount of the Contract, as the case may be, by a fair and reasonable valuation.

FOURTH.—Should the Contractor, at any time during the progress of the said works, refuse or neglect to supply a sufficiency of materials or workmen, the Owner shall have the power to provide materials and workmen after three days' notice in writing being given, to finish the said works, and the expense shall be deducted from the amount of the Contract.

FIFTH.—Should any dispute arise respecting the true construction or meaning of the Drawings or Specifications, the same shall be decided by _____ and _____ decision shall be final and conclusive; but should any dispute arise respecting the true value of the extra work, or of the works omitted, the same shall be valued by two competent persons—one employed by the Owner, and the other by the Contractor—and those two shall have power to name an umpire, whose decision shall be binding on all parties.

SIXTH.—The Owner shall not, in any manner, be answerable or accountable for any loss or damage that shall or may happen to the said works, or any part or parts thereof respectively, or for any of the materials or other things used and employed in finishing and completing the same, (loss or damage by fire excepted).

In Witness Whereof, the said parties to these presents have hereunto set their hands and seals, the day and year above written.

Witnesses:

[Form Approved by The Co-operative Building Plan Association, New York.]

BOND.

Know all Men by these Presents, That _____

and _____ held and firmly bound unto _____

_____ in the sum of _____

_____ Dollars, for which payment well and duly to be made, I _____ bind myself _____ heirs, executors, administrators, or assigns.

Whereas, _____

_____ has contracted with _____

_____ to execute, construct, and complete _____

_____ for the sum of \$ _____ by a contract dated _____

_____ 18____, hereto annexed; and the condition of this obligation is, that if the said _____

_____ shall duly perform said Contract, then this obligation is to be void, but if otherwise, the same shall be and remain in full force and virtue.

IN WITNESS WHEREOF, I _____ have hereunto set my _____ hand and seal this _____ day of _____ 18____.

Witnesses:

BILL OF QUANTITIES

of Work and Materials required to Build, Erect, and Complete a _____ House, on Lot No. _____
for Mr. _____ in accordance with plans and written specifications made by
_____, Architects.

(1.) MASON'S ESTIMATE.

MATERIALS AND WORK.	QUANTITIES.	Price per Unit.	\$	Cts.
Excavation (cubic yards).....				
Footings (lineal feet).....				
Concrete Foundations (cubic feet).....				
Rubble Work (cubic feet).....				
Laid in Cement Mortar.....				
" Lime ".....				
BRICKWORK per thousand (21 bricks per cubic foot).....				
Hard-burnt Brick for Walls.....				
" " Piers, Chimneys, Arches.....				
Pressed Brick.....				
Pale Brick.....				
Terra Cotta.....				
Surface Concreting (square feet).....				
" Asphalting (square feet).....				
Tile Floors (square feet).....				
CUT STONE WORK.—				
Bluestone: Sills (lineal feet).....				
Lintels (lineal feet).....				
Coping (lineal feet).....				
Hearths.....				
FREESTONE WORK.—Sills.....				
Lintels.....				
Quoins.....				
Flag.....				
PLASTERING.....coats (hard finish), (square yards).....				
First Story.....yards				
Second Story.....yards				
".....yards				
Plaster Cornices, in lineal feet.....				
Plaster Center-pieces.....				
Whitewashing (square yards).....				
Rough-cast Cement (square yards).....				
" Cornices (lineal feet).....				
MISCELLANEOUS.—Paving (square feet).....				
Drain Pipes, Cement (lineal feet).....				
" Tile (lineal feet).....				
Stone Drains (lineal feet).....				
Extras for leveling and grading (cubic yards).....				
CISTERN.—Excavation (cubic yards).....				
Brickwork per mill.....				
Manhole Cover.....stone				
CRESSPOOL.—Excavation (cubic yards).....				
Rubble Work (cubic feet).....				
Manhole Cover.....				
IRON WORK.—Anchors, etc. (lbs.).....				
Railings (lbs.).....				
Iron Cornices (lineal feet).....				

(2.) CARPENTER'S WORK.

MATERIALS AND WORK.	QUANTITIES.	Price per Unit.	\$	Cts.
TIMBERS.—(Framing, floor joists, studding, rafters, etc.), in superficial feet, per thousand.....				
Hemlock.....				
Spruce.....				
Pine (first quality).....				
" (second quality).....				
" (yellow).....				
Girders.....inches x inches.....				
Sills.....inches x inches.....				
Posts.....inches x inches.....				
Plates.....inches x inches.....				
Studs.....inches x inches.....				
".....inches x inches.....				
Ties and Inter-ties.....inches x inches.....				
Braces.....inches x inches.....				
Floor Beams: First Story.....in. x in.				
Second Story.....in. x in.				
Third.....in. x in.				
Ceiling Joists.....inches x inches.....				
Basement Story Joists.....in. x in.				
Rafters.....inches x inches.....				
".....inches x inches.....				
".....inches x inches.....				
".....inches x inches.....				
Hip and Valley Rafters.....in. x in.				
Ridgepole.....inches x inches.....				
Purlins.....inches x inches.....				
Collar Beams.....inches x inches.....				
Wall Plate.....inches x inches.....				
Veranda Sills and Cross Sills.....in. x in.				
Joists.....inches x inches.....				
Rafters.....inches x inches.....				
Plates.....inches x inches.....				
Posts.....inches x inches.....				
Furring Strips.....inches x inches.....				
Cross-bridging.....inches x inches.....				
Other Timbers.....inches x inches.....				
LUMBER.—(Superficial feet).....				
Rough Boarding.....				
Sheathing.....				
Siding (horizontal).....				
" (vertical).....				
Flooring.....				
Deafening.....				
Hard-wood Flooring.....				
Board Partitions (lineal feet).....				
FELTING.—(Square yards).....				
CORNICES.—(Lineal feet).....				
STAIRS.—Complete.....				
DOORS AND WINDOWS.—Trimnings included, complete.....				
Main Doors.....				
Sliding Doors.....				
Passage Doors.....				
Closet Doors.....				
Cellar Doors.....				
Trap Doors.....				
WINDOW FRAMES.—Casement Windows.....				
Windows, pulley stiles.....				
Attic Windows.....				
Cellar Windows.....				
Transoms.....				
BASE.—First Story (lineal feet).....				
Second Story.....				
Story.....				

(2.) CARPENTER'S WORK—Continued.

MATERIALS AND WORK.	QUANTITIES.	Price per Unit.	\$	Cts.
WAINSCOTING.—(Lineal feet).....				
BLINDS.—(Hung, Fastened, etc., complete).....				
Venetian Blinds.....				
Inside Blinds.....				
Battened Shutters.....				
HARD-WOOD WORK.—Mantels, in.....				
Mantels, in.....				
Saddles.....				
Doors.....				
Stairs.....				
Floors.....				
Roofs.—Shingling (square feet).....				
Crestings (lineal feet).....				
PIAZZAS AND BALCONIES.—Columns.....				
Posts.....				
Rafters.....				
Balustrades (lineal feet).....				
Lattice and Fretwork.....				
Water-closets, Bath-rooms, Wash-tubs, Sinks, etc., fitted up complete in.....				
CLOSETS.—Ceiling Walls with.....				
Shelving.....x.....(lineal feet).....				
PANTRY.—Countertop.....				
Drawers.....				
MANTELS.—				
MISCELLANEOUS.—Bells, complete.....				
Ventilators.....				
Scuttle.....				
Skylight.....				
Coal Bins.....				
Fences (lineal feet).....				
Woodshed.....				
HARDWARE AND IRON WORK.—Nails, Spikes, etc. (lbs.).....				
Bolts.....				
Locks: Closet Locks.....				
Rim Locks.....				
Mortise Locks.....				
Latches.....				
Hinges and Butts:				
Shutter Hinges, Fastenings, Sill Catches, etc.....				
Sash Locks.....				
Axle Pulleys.....				
Weights, etc.....				
Rails for Sliding Doors.....				
Knobs.....				
Handles, Bars, or Hooks.....				
Total for Carpenter's Work.....				

(3.) SLATER'S WORK.

MATERIALS AND WORK.	QUANTITIES.	Price per Unit.	\$	Cts.
Slating Main Roof with.....slates (sq. ft.).....				
" Piazza Roofs with.....".....				
Ornamental Slating.....".....				
Felting.....".....				
Flashing (lineal feet).....				
Terra Cotta Cresting (lineal feet).....				
Iron Cresting (lineal feet).....				
Tile Covering (square feet).....				
Miscellaneous.....				
Total for Slater's Work.....				

(4.) TINNER'S WORK.

MATERIALS AND WORK.	QUANTITIES.	Price per Unit.	\$	Cts.
Roof (square feet).....				
Flashings (square feet).....				
Gutters (lineal feet).....				
Leaders (lineal feet).....				
Galvanized Iron Work.....				
Copper Work.....				
Zinc Work.....				
Skylights.....				
Ventilators.....				
Speaking Tubes.....				
Furnaces.....				
Hot-Air Pipes.....				
Registers.....				
Miscellaneous.....				
Total for Tinning.....				

(5.) PLUMBER'S WORK.

MATERIALS AND WORK.	QUANTITIES.	Price per Unit.	\$	Cts.
PIPING.—(Water Supply) (lineal feet).....				
Waste-pipes (lineal feet).....				
Traps.....				
Hydrants.....				
Water closets.....				
Wash-basins.....				
Bath-tubs.....				
Sinks.....				
Range and Boiler.....				
Stationary Wash-tubs.....				
Tanks.....				
Pumps.....				
Miscellaneous.....				
Total for Plumbing.....				

(6.) PAINTING.

MATERIALS AND WORK.	QUANTITIES.	Price per Unit.	\$	Cts.
OUTSIDE WORK.—Coats (square yards).....				
ROOFS.—Coats (square yards).....				
INSIDE WORK.—Coats.....				
GRAINING, as follows:				
Doors.....				
Windows.....				
Oiling Hard Wood-work.....				
Total for Painting.....				

(7.) MISCELLANEOUS EXPENSES.

MATERIALS AND WORK.	QUANTITIES.	Price per Unit.	\$	Cts.
Grand Total Cost of Building.....				

AGREEMENTS AND CONTRACTS.

Title to property is more frequently derived by contract, that is, by obligations arising from agreements, than in any other way; and a statement of the leading principles of the law of contracts will prove of value in this work of universal utility, interesting everybody who owns or occupies a house.

Probably the most complete definition of contract is that one penned by Chief-justice Marshall, which reads as follows: "A contract is an agreement in which a party undertakes to do, or not to do, a particular thing."

The obligation entered upon by the contractor must be according to the law of the State in which it is made, and is then valid everywhere.

Every contract involves the promise and obligation thereby entered upon by the obligor or debtor, and the right of the creditor or obligee, who can enforce his right in a court of law.

Contracts are valid only when both the creditor and debtor consent, when both have the right to consent, and when the consideration for the obligation is lawful.

There must be an object for a contract, and this must be possible, ascertained, useful to one of the parties, in commerce, and, as was before remarked, not forbidden by law.

The consideration of a contract is the reason or motive why it is made; in other words, the cause of the agreement. While, generally speaking, a consideration expressed in its terms is requisite to a contract, in some cases this is not necessary, as in the case of a deed, a bond, promissory note, and bill of exchange. When promises are mutual, and the promise of one is the consideration of the other, they are valid.

Damages for breach of contract cannot be recovered excepting loss be shown. This is the general doctrine. In a case of breach of contract without actual loss, the plaintiff is entitled to judgment for nominal damages and costs. Failure to convey land according to covenant, entitles plaintiff to the value of the land at the time the conveyance was to be made. The measure of damages on all contracts to deliver goods on demand is the value of the property at the time of the demand. In the case of a bond the penalty for breach is named and agreed upon by the parties.

When a contract is entered into in one place to be executed in another, the laws of the place in which it is to be executed govern its validity, construction, and performance, it being presumed that the parties had those laws in view when they contracted.

Nearly every State in the Union has made statutory provision as to what kind of contracts must be in writing.

The rule as to the payment of money when the day of performance is not stated in the contract is, that the first day is not included, and a bill due in ten days would not be due till the end of the eleventh day, so that suit could not be brought until the twelfth. The rule is to compute by calendar months, in ascertaining the time when money is due on a contract in which the exact day of settlement is not stated.

A contract under seal is called a specialty or deed. A deed is defined to be an instrument under seal, written or printed, containing some contract or agreement, and which has been delivered by the parties. Sometimes, perhaps more generally in the United States, the word deed is used to designate a conveyance of real estate. The seal of a deed in this country is oftenest made with a pen, no wax or impression being required. Of course the law of the State, in the matter of the seal, must be obeyed by contracting parties. A most important distinction of instruments under seal is that they are not barred by the act of limitations, and no presumption of payment arises till a period of twenty years has elapsed, nor then, if the reason for the non-payment can be explained.

Simple contracts are such as are not under seal, and are either oral or written.

Written contracts should be in ink, for obvious reasons, but are not invalid if in pencil. Care should be taken that they express exactly all thereby agreed to be done or not to be done; and the use of well-trying forms for their specified purposes, is therefore recommended. This is the more important when it is remembered that a contract may be void because lacking some formality required by law.

Written contracts prove themselves; oral agreements must be proved by evidence.

Original contracts and all copies should be drawn up without interlineations. Copies should be accurate, and all parties should possess one.

It should be remembered that a legal representative can sue on a contract, although not named in it.

All contracts of importance should be in writing. In most agreements having reference to house property, the rule will be found to be that they must be written.

Of the forms appended, the majority are of service in every part of the Union. Alterations adapting them for use in any State can be made quite easily.

AGREEMENT TO SELL LAND.

ARTICLES OF AGREEMENT, made the day of one thousand eight hundred and between of the first part, and of the second part,

WITNESSETH, That the said part of the first part, for and in consideration of the sum of dollars, to in hand paid, have contracted and agreed to sell to the said part of the second part all that certain piece or parcel of land, situate in the town of in County and State of known and distinguished on a Map made by as Lot number

And the said part of the first part, agree to execute and deliver to the said part of the second part, a Warranty Deed for the said land: PROVIDED, and upon condition, nevertheless, that the said part of the second part, heirs or assigns, pay to the said part of the first part, heirs or assigns, for the same land, the sum of lawful money of the United States of America, payable as follows: the sum of

Together with lawful interest on the same, from the date hereof: And the said part of the second part, for heirs, executors, and administrators, do covenant and agree, to and with the said part of the first part, heirs and assigns, that the said part of the second part will pay the said several sums as they severally become due, with the interest thereof, without deduction of any taxes or assessments whatever. AND IT IS FURTHER AGREED between the parties to these presents, that if default be made in fulfilling this agreement, or any part thereof, on the part of the said part of the second part,

then and in such case, the said part of the first part, heirs and assigns, shall be at liberty to consider this contract as forfeited and annulled, and to dispose of the said land to any other person, in the same manner as if this contract had never been made. IN WITNESS WHEREOF, have hereunto set hand and seal the day and year above written.

Signed and delivered in the presence of

AN AGREEMENT FOR WARRANTY DEED USED IN THE WESTERN STATES.

ARTICLES OF AGREEMENT, made this day of in the year of our Lord one thousand eight hundred and between party of the first part, and party of the second part,

WITNESSETH, That said party of the first part hereby covenants and agrees, that if the party of the second part shall first make the payment and perform the covenants hereinafter mentioned on part to be made and performed, the said party of the first part will convey and assure to the party of the second part, in fee simple, clear of all incumbrances whatever, by a good and sufficient warranty deed, the following lot, piece, or parcel of ground, viz:

And the said party of the second part hereby covenants and agrees to pay to said party of the first part, the sum of dollars, in the manner following: dollars, cash in hand paid, the receipt whereof is hereby acknowledged, and the balance

with interest at the rate of per centum per annum, payable annually, on the whole sum remaining from time to time unpaid, and to pay all taxes, assessments, or impositions that may be legally levied or imposed upon said land, subsequent to the year 18... And in case of the failure of the said party of the second part to make either of the payments, or perform any of the covenants on part hereby made and entered into, this contract shall, at the option of the party of the first part, be forfeited and determined, and the party of the second part shall forfeit all payments made by on this contract, and such payments shall be retained by the said party of the first part in full satisfaction and in liquidation of all damages by sustained, and shall have the right to re-enter and take possession of the premises aforesaid.

It is mutually agreed that all the covenants and agreements herein contained shall extend to and be obligatory upon the heirs, executors, administrators, and assigns of the respective parties.

IN WITNESS WHEREOF, The parties to these presents have hereunto set their hands and seals the day and year first above written.

(Signatures.) (Seals.)

Signed, sealed, and delivered in the presence of

CONTRACT TO CONVEY PROPERTY.

THIS ARTICLE OF AGREEMENT, made and entered into the day of one thousand eight hundred and between of the first part and of the second part.

WITNESSETH, as follows: The said party of the first part hereby agrees to sell unto the said party of the second part, all

for the sum of to be paid by the said party of the second part, in manner and at the times hereinafter mentioned and covenanted on the part of the said party of the second part: AND the said party of the first part further agrees, that on the day of on receiving from the said party of the second part the sum of the said party of the first part, shall and will, at at own proper cost and expense, execute and deliver to the said party of the second part, or to assigns, a proper deed of conveyance, duly acknowledged, for the conveying and assuring to them the fee simple of the said premises free from all incumbrances which deed of conveyance shall contain a general warranty, and the usual full covenants.

And the said party of the second part hereby agrees to purchase of the said party of the first part, the premises above mentioned, at and for the price and sum above mentioned, and to pay to the said party of the first part the purchase money therefor, in manner and at the times following, to wit:

And it is further agreed by and between the parties to these presents, that the said party of the first part shall have and retain the possession of said premises, and be entitled to the rents and profits thereof until the day of when full possession of the same shall be delivered to the said party of the second part, by the said party of the first part:

And it is understood and agreed, that the stipulations aforesaid are to apply to and bind the heirs, executors, administrators, and assigns of the respective parties.

And it is further hereby agreed, that in case the said party of the first part shall fail or refuse to execute and deliver a proper deed of conveyance in manner and at the time and place above specified for that purpose, provided the party of the second part shall be ready to fulfill and perform the covenants then to be fulfilled on part; or in case the said party of the second part shall fail or refuse to pay the said sum of at the time and place as above agreed upon, provided the party of the first part shall be ready to deliver such deed of conveyance, as aforesaid; then the party so failing shall and will pay to the other party, or assigns, the sum of dollars, which sum is hereby declared fixed and agreed upon, as the liquidated amount of damages to be paid by the party so failing as aforesaid, for non-performance.

CONTRACT FOR PROPERTY.

AGREEMENT, made the day of in the year one thousand eight hundred and between of the first part and of the second part, in manner following: The said part of the first part hereby agree to sell unto the said part of the second part, all

for the sum of to be paid by the said part of the second part, in manner and at the times hereinafter mentioned and covenanted on the part of the said part of the second part. And the said part of the first part further agree that on the day of 18... at o'clock M., on receiving from the said part of the second part the purchase money of the said premises, as hereinafter set forth, the said part of the first part, shall and will, at No Street, in the City of at own proper cost and expense, execute and deliver to the said part of the second part or to assigns, a proper deed of conveyance, duly acknowledged, for the conveying and assuring to them the fee simple of the said premises, free from all incumbrances, which deed of conveyance shall contain a general warranty, and the usual full covenants.

And the said part of the second part hereby agree to purchase of the said part of the first part the premises above mentioned, at and for the price and sum above mentioned, and to pay to the said part of the first part the purchase money therefor, in manner and at the times following, to wit:

And it is further agreed by and between the parties to these presents, that the said part of the first part shall have and retain the possession of said premises, and be entitled to the rents and profits thereof until the day of 18... when full possession of the same shall be delivered to the said part of the second part, by the said part of the first part:

And it is understood and agreed, that the stipulations aforesaid are to apply to and bind the heirs, executors, administrators, and assigns of the respective parties.

And it is further hereby agreed, that in case the said part... of the first part shall fail or refuse to execute and deliver a proper deed or conveyance in manner and at the time and place above specified for that purpose, provided the part... of the second part shall be ready to fulfill and perform the covenants then to be fulfilled on... part; or in case the said part... of the second part shall fail or refuse to pay the purchase money therefor, at the time and place as above agreed upon, provided the part... of the first part shall be ready to deliver such deed or conveyance, as aforesaid, then the part... so failing shall and will pay to the other part... or... assigns, the sum of... dollars, which sum is hereby declared agreed upon as the fixed and liquidated amount of damages to be paid by the part... so failing as aforesaid, for non-performance.

IN WITNESS WHEREOF, the parties to these presents have hereunto set their hands and seals the day and year first above written.

Sealed and delivered in the presence of

County of... ss:

On this... day of... in the year one thousand eight hundred and... before me, the undersigned, personally came... to me known, and known to me to be the individual described in, and who executed the foregoing instrument, and... thereupon duly acknowledged to me that he had executed the same.

CONTRACT TO EXCHANGE PROPERTY.

AGREEMENT, made and entered into the... day of... in the year one thousand eight hundred and... between... part... of the first part, and... part... of the second part, in manner following: The said part... of the first part, in consideration of... dollar... duly paid by the part... of the second part, the receipt whereof is hereby acknowledged, and also in consideration of the conveyance of the property herein-after mentioned, belonging to the said part... of the second part, do... hereby agree on... part, to give and grant unto the said part... of the second part...

And the said part... of the second part, in consideration of the sum of... dollar... duly paid by the part... of the first part to the said part... of the second part, the receipt whereof is hereby acknowledged, and also for the conveyance of the property and consideration first above mentioned, in exchange do... likewise agree on... part, to give and grant unto the said part... of the first part...

The parties to these presents mutually agree to execute, acknowledge, and deliver, each to the other, or to their assigns, and at their own proper cost and expense, a proper deed or deeds for the conveying and assuring, each to the other, the fee simple of the property of each, above described, free from all encumbrances, of any name or nature whatever... and which deeds shall be delivered and exchanged on the... day of... 18...

And for the true and faithful performance of all and every of the covenants and agreements above mentioned, the parties to these presents bind themselves, each unto the other, in the penal sum of... dollars, as fixed and settled damages, to be paid by the failing part...

And it is understood that the stipulations aforesaid are to apply to and bind the heirs, executors, administrators, and assigns of the respective parties.

IN WITNESS WHEREOF, the parties to these presents have hereunto set their hands and seals the day and year first above written.

Sealed and delivered in the presence of

STATE OF... }
...of... } ss.
COUNTY OF... }

On the... day of... in the year one thousand eight hundred and... before me personally came... to me known, and known to me to be the individual described in, and who executed the foregoing instrument, and... acknowledged that he executed the same.

STATE OF... }
...of... } ss.
COUNTY OF... }

On the... day of... in the year one thousand eight hundred and... before me personally came... to me known, and known to me to be the individual described in, and who executed the foregoing instrument, and... acknowledged that he executed the same.

PARTY-WALL AGREEMENT.

AGREEMENT, made the... day of... in the year of our Lord one thousand eight hundred and eighty... between... of the first part and... of the second part;

THAT, WHEREAS, the said... is the owner of... in the City of New York, bounded and described as follows, viz:...

AND WHEREAS, the said... is the owner of the... adjoining the above described premises on the... side thereof...

And the said parties hereto do hereby mutually covenant and agree, for and with themselves and their respective heirs and assigns: That if it shall become necessary to Repair or Re-build the whole or any portion of the said Party-wall, the expense of such repairing or rebuilding shall be borne equally by the parties hereto, their respective heirs and assigns. And that, whenever the said Party-wall, or any portion thereof, shall be rebuilt it shall be erected on the same spot where it now stands, and of the same size and of the same or similar materials.

It is further mutually understood and agreed by and between the parties hereto, that this agreement shall be perpetual and at all times be construed into a covenant running with the land, and that no part of the fee of the soil herein described, and upon which said Party-wall is inclosed, shall be transferred or conveyed in or by these presents.

IN WITNESS WHEREOF, The part... hereto ha... set... hand... and seal... the day and year first above written.

In presence of

STATE OF... }
...of... } ss.
COUNTY OF... }

On the... day of... in the year one thousand eight hundred and eighty... before me personally came... to be the individual described in and who executed the foregoing instrument, and acknowledged that he executed the same.

A BRIEF BUILDING CONTRACT.

CONTRACT for building made this... day of... one thousand eight hundred and... by and between... of... in the County of... Builder...

The said... covenants and agrees to and with the said... to make, erect, build, and furnish, in a good, substantial, and workmanlike manner... upon... situate... said... to be built agreeable to the draught, plans, explanations, or specifications furnished, or to be furnished to said... by... of good and substantial materials; and to be finished complete on or before the... day of... And said... covenants and agrees to pay to said... for the same... dollars as

follows:...

Security against mechanics' or other lien is to be furnished by said... prior to... payment by said...

And for the performance of all and every the articles and agreements above mentioned, the said... and... do hereby bind themselves, their heirs, executors, and administrators, each to the other, in the penal sum of... dollars, firmly by these presents.

IN WITNESS WHEREOF, We, the said... and... have hereunto set our hands the day and year first above written.

(Signatures.) (Seals.)

Executed and delivered in presence of

DEEDS.

A deed as defined in American law, is a written instrument executed by the parties for the sale of lands. A fee simple, a life estate, a term of years, may be transferred by deed; and an incorporeal hereditament, which lies in grant, may be alienated by a deed. Conveyance is the transfer of the title of land by one or more persons to another or others. The word persons includes corporations, or artificial persons, as well as natural persons.

Forms of deeds are appended, but care should be taken that in drawing up these instruments the legal requirements of the State should be met fully.

He who makes the deed is called the grantor, and the other party is called the grantee.

It is better that names should be written in full, but one Christian name of each person named as a party is sufficient.

A deed by a corporation must be executed in the corporate name, by officers lawfully authorized, and under the seal of the corporation.

The seal imports a consideration, but one is generally mentioned in the deed, frequently the nominal sum of one dollar.

Each party has the right to demand that the deed be read to him before he signs it.

Each State in the Union has made provision as to whether or not deeds need to be sealed; and if they do, what constitutes a seal.

In general, witnesses are necessary to the execution of a deed. The statutes of different States vary as to the requirements in witnessing a deed.

A deed has no effect as a consequence until it is delivered. Delivery is made when the instrument is transferred at the will of the grantor to the grantee. When this transfer has been made, the rights of the grantor have been divested from him and vested in the grantee. Then, and not till then, is the instrument valid, and the deed takes effect at, and not before, the time of delivery.

Under the statutes of every State in the Union, provision is made for recording deeds. The time in which this may be done varies in different States.

The expression "and his heirs" is necessary to vest an estate in the grantee, which he can either sell during his lifetime, or leave to his heirs. Without these words his title is limited to his lifetime, and he cannot sell it.

Chancellor Kent defines fee simple as follows: "Fee simple is a pure inheritance, clear of any qualification or condition, and it gives a right of succession to all the heirs generally, under the restriction that they must be of the blood of the first purchaser, and of the blood of the person last seized. It is an estate of perpetuity, and confers an unlimited power of alienation, and no person is capable of having a greater estate or interest in land."

In a warranty deed, of which forms are appended, the grantor therein promises to be answerable for any defect whatever that there may be in the title.

In a quit-claim deed, the grantor divests himself of all the title in the land which he has possessed, and vests it in the grantee.

Bargain and sale is a contract by which a person conveys his lands to another for a pecuniary consideration.

The following is a brief statement of the laws relating to deeds in the States and Territories of the American Union and the Dominion of Canada.

Abstract of Laws Relating to Deeds in the United States and Canada.

STATES.

ALABAMA—Acknowledgment and proof of conveyances may be taken by judges of any court of record, their clerks, chancellors and registers in chancery, justices of the peace and notaries public. In other States, by the judges and clerks of any court of record in any State, notary public or commissioner appointed by the governor of Alabama. Out of the United States, such acknowledgments and proof may be taken by the judge of any court of record, mayor or chief magistrate of any city, town, borough, or county, notary public, or any diplomatic, consular, or commercial agent of the United States. All conveyances of land must be written or printed on parchment or paper, and signed by the vendor, or by his agent, legally authorized in writing. A wife may relinquish her right to dower by joining with her husband in a conveyance of land in the presence of two witnesses, who must attest the same, and acknowledging same as above provided. A husband must join in conveyance of wife's separate property.

ARKANSAS—Acknowledgment may be made before a justice of the peace of the county where the land lies, judge or clerk of any court of record, or notary public. Acknowledgments in other States and foreign countries same as in Alabama. When husband and wife convey the lands of the husband the certificate must show that the wife acknowledged the relinquishment.

CALIFORNIA—Deeds need not be under seal. Acknowledgment may be made within the State, before a judge or clerk of a court of record; or a mayor or recorder of a city; or a court commissioner; or a county recorder; or a notary public; or a justice of the peace. Out of the State, and in the United States, before a justice of the peace or clerk of any court of record; or a commissioner appointed by the governor of this State for that purpose; or any other officer authorized by its laws to take such acknowledgment. Out of the United States, before a minister, commissioner, or *charge d'affaires* of the United States, resident and accredited in the country where such acknowledgment is made; or a consul, vice-consul, or consular agent of the United States resident in the country where such acknowledgment is made; or a judge of a court of record of the country where the acknowledgment is made, or a commission appointed for that purpose by the governor of the State, pursuant to special statutes; as a notary public. The husband or wife can

each, without the consent or assistance of the other, convey his or her separate property. They must join in a conveyance of their community property.

COLORADO—Deeds must be under seal—a scrawl is a seal. Acknowledgments in the State may be made before any judge or clerk of a court of record under the seal thereof; or before the clerk of any county or his deputy under the county seal; or before any notary public under his notarial seal; or before any justice of the peace. But a justice's certificate must be accompanied by a certificate of the county clerk to his official capacity where the lands are not in the county of his jurisdiction. Acknowledgments out of the State and in any foreign country should be made as in California. Witnesses to deeds are not necessary, but are desirable.

CONNECTICUT—Deeds must be in writing, and under seal—a scrawl is a seal. Subscribed by the grantor or his attorney duly authorized, attested by two witnesses, with their own hands, and acknowledged by the grantor as his free act and deed. Acknowledgments, in the State, are made before a judge of a court of record of this State or of the United States, justice of the peace, commissioner of the school fund, commissioner of the superior court, notary public, town clerk, or assistant town clerk. Acknowledgments out of the State, and in foreign countries, should be made as in California. Conveyances of real estate situated in this State, and powers of attorney therefor, executed and acknowledged in any other State or Territory in conformity to its laws relative to the conveyance of lands therein situated, are valid. The wife need not be privately examined apart from her husband. The husband joins with the wife in the conveyance of her real estate, but conveys his own without her signature. Dower attaches only to the real estate belonging to the husband at his decease.

DELAWARE—Deeds must be in writing under seal—a scrawl is a seal. Acknowledgments may be made before any judge or clerk of record, justice of the peace, or notary public. If out of the State and in a foreign country, the same as in Alabama. Only one witness is necessary to a deed. The certificate of acknowledgment must show the wife relinquishes her dower, and that she executed the deed willingly, without compulsion, or threats, or fear of her husband's displeasure, and the private examination must be certified. Deeds must be recorded within one year after the sealing and delivering of the instrument.

DISTRICT OF COLUMBIA—Acknowledgments may be made before any of the following named officers of State, district, county, or Territory within United States, in which persons making deed may be living, namely: Before any judge or court of record and of law; any chancellor of State; any judge of supreme, circuit, district, or territorial courts of the United States; any justice of the peace; any notary public; any commissioner of the circuit court of district appointed for that purpose. The officer taking acknowledgment must annex to the deed a certificate under his hand and seal. When acknowledgments are made beyond limits of District, within United States, the certificate of the same must be accompanied by certificate of the register clerk or other public officer having cognizance of the fact under his official seal, that, at the date of the acknowledgment, the officer taking the same was, in fact, the officer he purported to be. Deeds made in a foreign country may be executed and acknowledged before any judge or chancellor of any court, master or master extraordinary in chancery or notary public, or before any secretary of legation or consular officer of the United States.

FLORIDA—Deeds must be in writing, sealed and delivered in the presence of not less than two witnesses—a scrawl with the word seal written in it, is a sufficient seal. Acknowledgments may be made before any judge, clerk of the circuit court, notary public, or justice of the peace within the State. If executed in any other State, or foreign country, they may be made as given in State of Alabama. Should the deed be acknowledged in any other State or country, before any officer not having a seal of office, he should have attached thereto a certificate of the clerk of a court of record, a certificate of the secretary of state, minister plenipotentiary extraordinary, minister resident, *charge d'affaires*, commissioner or consul (as the case may be), that the person whose name is subscribed to the certificate of acknowledgment was at the date thereof such officer as he is therein represented to be, that he believes the signature of such persons subscribed thereto to be genuine, and that the deed is executed and acknowledged according to the laws of such State, Territory or foreign country. Deeds must be recorded within six months after the sealing and delivery of the instrument. The wife must join with the husband in the execution of deeds to relinquish her dower, and must be separately examined as in Delaware.

GEORGIA—Deeds must be in writing, under seal, or scroll, signed by the maker, attested by at least two witnesses and delivered to the purchaser, or some one for him, and made for a consideration. Acknowledgment in this State must be attested by a judge of a court of record, or a justice of the peace, or notary public, or clerk of the superior court of the county where the land lies. Out of this State it must be attested by a commissioner of deeds for the State of Georgia, or a consul or vice-consul of the United States, or by a judge of a court of record in the State where executed, with the certificate of the clerk, under the seal of such court, of the genuineness of the signature of such judge. Deeds must be recorded within one year from date of sealing and delivery, and on failure to record, such deed loses priority over a subsequent deed which is recorded.

ILLINOIS—Deeds must be under seal—a scrawl answers for a seal. No witnesses are required. Acknowledgments in the State may be made before any judge or clerk of a court of record, master in chancery, notary public, United States commissioner, circuit or county clerk, or justice of the peace. Without the State such acknowledgment may be taken before a justice of the peace, a notary public, a United States commissioner, commissioner to take acknowledgments of deeds, mayor of a city, clerk of a county, such officer affixing his official seal, or before any judge, justice, or clerk of the supreme court, or any circuit or district court of the United States, or any judge, justice, or clerk of the supreme circuit, superior, district, county or common pleas court of any of the United States or their Territories. Without the State and in foreign countries, the acknowledgment may be taken before any Illinois commissioner, or before any officer of the State, Territory, or county where made, authorized by the laws thereof to take acknowledgments. The officer must be authenticated by the certificate of the county clerk or a clerk of record under his official seal. No deed or other instrument can be construed as releasing or waiving the right of homestead, unless the same shall contain a clause expressly releasing or waiving such right; and in such case the certificate of acknowledgment must contain a clause substantially as follows: "Including the release and waiver of the right of homestead."

INDIANA—Deeds must be in writing, signed and acknowledged; seals and scrolls are abolished; the word "heirs" is not necessary, neither are witnesses. Acknowledgments in this State may be made before a justice of the peace of the county where the lands lie, before a judge or before a notary public; if out of the State, before a commissioner of this State, notary public, or before the chief officer or mayor of a town or city who has a seal, or before a consul or minister of the United States who has a seal. The seal must be attached and the deed recorded in the county where the land lies. Must be recorded within forty-five days from the execution.

IOWA—Deeds must be in writing, signed and acknowledged; seals and witnesses are not necessary. Acknowledgments made in the State must be before a judge or clerk of any court of record, county auditor or his deputy, each notary public and justice of the peace in his own county. Out of the State must be before some court of record, before some commissioner for the State of Iowa, or before a notary public or justice of the peace.

KANSAS—Deeds must be in writing, signed and acknowledged. Private seals and witnesses are not necessary. Acknowledgments within this State must be before some court having a seal, or some judge, justice, or clerk thereof, or some justice of the peace, notary public, county clerk, or register of deeds, or mayor or clerk of incorporated city.

When acknowledged without this State, it must be before some court of record, or clerk or officer holding the seal thereof, or before some notary public or justice of the peace, or commissioner to take acknowledgments appointed by the governor of this State, or before any consul of the United States, resident in a foreign port or country. If taken before a justice of the peace, the acknowledgment must be accompanied by a certificate of his official character, under the hand of some court of record, to which the seal of said court shall be affixed. Husband and wife should always join in conveyances. No separate acknowledgment is required on the part of the wife.

KENTUCKY—Deeds must be in writing; no seal is necessary. Acknowledgments in this State by persons other than married women may be made before the clerk of a county court; outside of the State, in conformity with the laws of the State or country where acknowledged. A deed of a married woman must be acknowledged as named in the preceding sections. Previous to such acknowledgment, it shall be the duty of the officer to explain to her the contents and effect of the deed separately and apart from her husband, and thereupon, if she freely and voluntarily acknowledge the same, and is willing for it to be recorded, the officer shall certify the same. When taken by an officer out of this State, the same must be acknowledged and certified to. Deeds made by residents of Kentucky must be recorded within sixty days from the date thereof. By non-residents, within four months; if out of the United States, within twelve months. Deeds are not legally recorded until the clerk's tax is paid. The county clerk is the recorder of deeds. Deeds must be recorded in the county where the land lies, and take effect in the order in which they are recorded.

LOUISIANA—Deeds must be in writing; no seal or scrawl is necessary. Acknowledgment in the State must be made before a notary public or recorder in presence of two witnesses, who may prove the signature. Out of the State, before a commissioner of Louisiana and two witnesses, or in conformity to the laws of the State where acknowledged. The husband must join in the execution of a deed made by the wife conveying her real estate, and authorize her. When the husband sells his own real estate, the wife must join him and renounce all her rights, and she must be examined apart from her husband and duly informed of the nature of the act.

MAINE—Deeds must be in writing, signed, under seal; a scroll is not sufficient; witnesses are not necessary; acknowledgment in the State must be before a justice of the peace, or notary public. Out of the State, before any justice of the peace, magistrate, notary public, commissioner for the State, or by any United States minister, consul, or any notary public in any foreign country. The wife must join in the deed to relinquish dower, or she may do it by a separate deed. When she joins with her husband in the same deed, either can acknowledge the instrument. No separate examination of the wife is necessary.

MARYLAND—Deeds must be in writing, signed and sealed—a scroll is sufficient—and attested by at least one witness, and a consideration stated. Acknowledgments in the State may be made before any court of record, justice of the peace, the official character of the justice of the peace duly certified to under seal. Without the State, before a notary public, a judge of any court of record, or a commissioner of Maryland, to take acknowledgments of deeds. Out of the United States, before any minister or consul of the United States, a notary public under seal, or a commissioner of Maryland. The wife must join the husband in deeds of fee simple property to release her right of dower. No separate examination or special form of acknowledgment is necessary for a married woman. Deeds must be recorded within six months from date of signing and delivery.

MASSACHUSETTS—Deeds must be in writing, signed and sealed; a wafer, or other substance upon which an impression may be made, is a valid seal, but a scroll is not. A witness is not necessary. Acknowledgments may be made before any justice of the peace, magistrate, or notary public, or commissioner appointed for that purpose by the governor of this State within the United States, or in any foreign country, or before a minister or consul of the United States in any foreign country. In signing deeds, it is not necessary that the wife should be separately examined; it is sufficient to bar her dower, if she join with her husband in the conveyance.

MICHIGAN—Deeds must be in writing, signed and sealed—a scroll is regarded as a seal—and attested by two witnesses. Acknowledgments may be made before any judge or commissioner of a court of record, or before any notary public or justice of the peace within the State. The deed must be recorded in the county where the land lies. When executed in any other State they must be executed according to the laws of such State, and the execution thereof may be acknowledged before any officer authorized by the laws of such State to take acknowledgments; or they may be acknowledged before any commissioner appointed by the governor of this State for such purpose. Separate examination of wife is not necessary. A husband is not required to join in a deed by the wife conveying her property.

MINNESOTA—Deeds must be in writing, signed and sealed; a scroll is regarded as a seal, and attested by two witnesses, and recorded in the county where the property is. Acknowledgments may be made before a judge, a clerk of any court of record, notary public, justice of the peace, or court commissioner. Out of this State, before a judge of a United States court, judges or clerks, or justices of the peace, notaries public under seal, or commissioners appointed by the governor of this State for that purpose. No separate acknowledgment to a deed is required by a wife, but she must join in her husband's acknowledgment.

MISSISSIPPI—Deeds must be in writing; no seal is required. Acknowledgments may be made before any judge or clerk of a court of record, justice of the peace, or member of the board of supervisors in the State. If outside of the State, same as in Illinois. Separate examination of wife is no longer required.

MISSOURI—Deeds must be in writing, signed and sealed—a scrawl is regarded as a seal. Witnesses are not necessary. Acknowledgments in this State may be made before a justice of the peace of the county where the land lies, before a court or judge, the court having a seal, or before a notary public; if out of this State, before a commissioner of this State, notary public, or before a court, or judge, or clerk of a court having a seal, or chief officer or mayor of a town or city who has a seal, or consul or minister of the United States who has a seal. The seal must be attached and the deed recorded in the county where the land lies.

NEBRASKA—All deeds must be in writing, and signed by the grantor, in the presence of at least one witness, who must subscribe as such and be duly acknowledged or proved and recorded. Seals are not necessary. Acknowledgments may be taken before a judge or clerk of any court, justice of the peace, or notary public; no officer can take any such acknowledgment or proof out of his State jurisdiction. The certificate of acknowledgment must be endorsed on the instrument, and show that the grantor acknowledged the same to be his voluntary act and deed, and that the officer before whom the same was taken knew him to be the identical person whose name was affixed as grantor, or had satisfactory evidence of the fact. Acknowledgments taken in other States or foreign countries made as in State of Illinois. When made by a Nebraska commissioner must be accompanied by certificate of secretary of state to his capacity and signature. All deeds, duly executed and acknowledged, must be recorded in the office of the clerk of the county in which the land lies; in case the land is situated in an unorganized district, the deed is to be recorded in the office of the clerk of the county to which said district is attached for judicial purposes. No separate examination is required in taking a wife's acknowledgment; to convey her right of dower she must execute a deed with or without her husband.

NEVADA—Deeds must be in writing, signed and sealed, a scrawl being sufficient. Witnesses are not necessary. Acknowledgments may be made before a judge or clerk of a court having a seal, a notary public, or a justice of the peace. Out of the State, before any judge, clerk of a court having a seal, a notary public, or justice of the peace, or a commis-

sioner of this State. Outside of the United States, before some judge, or clerk of a court of a state, kingdom, or empire, having a seal, a notary public, or by a minister, commissioner, or consul of the United States. If the grantor does not acknowledge the execution of the deed, the witnesses may prove his signature; but if the witnesses are dead, or cannot be had, proof by competent parties, under oath, of the signature of the grantor, and at least one witness. The wife must join the husband in the execution of a deed, and must be examined apart.

NEW HAMPSHIRE—Deeds must be in writing, signed and under seal, and attested by two or more competent witnesses. Acknowledgments may be made before a justice of the peace of the county where the land lies, or before a notary public; if out of the State, before a commissioner of this State, notary public, or a justice of the peace. If out of the United States, before a minister or consul of the United States. The seal must be attached, and the deed recorded in the county where the land lies. No separate acknowledgment is required to be made by the wife, nor need she be examined separate and apart from her husband, but she must join in the deed to bar her dower or homestead. Certificate need not state that the wife releases her dower.

NEW JERSEY—Deeds must be in writing, signed and under seal, of wafer or wax, and attested by at least one witness. The word "heirs" should be incorporated to convey fee simple. Acknowledgment must be before the chancellor, or justice of the supreme court, a master in chancery, a judge of the court of common pleas, or a commissioner of deeds. Outside of the State or in a foreign country, same as law of New York. Both husband and wife must join in a deed conveying the estate of either, the wife to relinquish her dower in her husband's estate, and the husband to give his assent to the wife's conveyance.

NEW YORK—Deeds must be in writing, signed and under seal, of wafer or wax—a scrawl is not sufficient—with one or more subscribing witnesses, unless the deed is acknowledged by the grantor. Within the State the acknowledgment must be made by judicial officers generally, by notaries public and commissioners of deeds. Without the State, the acknowledgment may be taken before any New York commissioner, or before any officer of the State or Territory where made, authorized by the laws thereof, to take acknowledgments. The officer must be authenticated by the certificate of the county clerk under his official seal.

NORTH CAROLINA—Deeds must be in writing, signed and sealed, a scrawl being sufficient. Acknowledged and proved by one or more subscribing witnesses. Within the State, before a judge or clerk of a court of record, or notary public. When taken outside of the State and in foreign countries, they may be acknowledged as in New York. The wife must join the husband in the execution of all deeds concerning real estate, to bar her dower, and her signature cannot be proven, but her separate acknowledgment must be taken; she must be examined privily and apart from her husband, and must show she does it to relinquish her dower. Deeds must be recorded within two years in the county where the land lies.

OHIO—Deeds must be in writing, signed, sealed—a scroll will suffice—and acknowledged in the presence of two attesting witnesses, before any officer in the State empowered to take depositions. If the grantor is a non-resident he may execute according to the laws of the State of Ohio, or the laws of the State or county where it is executed and acknowledged. Deeds must be recorded within six months from date of execution. The wife must join her husband in a deed or power of attorney, whether the land be in her own right, or she have but a dower interest therein, and must be separately examined. Husband must join in deed of wife's property.

OREGON—Deeds must be in writing, signed, sealed—a scroll is sufficient—and attested by two witnesses, and duly acknowledged and recorded in the county where the land lies. Acknowledgment may be made before any judge of a court of record, justice of the peace, or notary public out of the State, in conformity with the laws of the State or county where acknowledged, accompanied by a certificate of the clerk or other proper certifying officer of a court of record, under the seal of his office, that the person whose name is subscribed to the certificate of acknowledgment was, at the date thereof, such officer as he is therein represented to be; that he believes the signature of such person subscribed thereunto to be genuine, and that the deed is executed and acknowledged according to the laws of such State, Territory, or district.

PENNSYLVANIA—Deeds must be in writing, signed and sealed. Acknowledgments may be made before any judge of a court of record, mayor, recorder, and alderman of Philadelphia, Pittsburg, Allegheny, and Carbondale, the recorders of deeds, the notaries public, and all justices of the peace. Without the State, in any foreign country, the acknowledgment may be taken before any officer of the State, Territory, or country where made, authorized by the laws thereof to take acknowledgments; such officers must be authenticated by a clerk of county or court under seal; if the grantor is in the military service of the United States, before any person holding the rank of major or any higher rank in said military service. Proof of the execution of a deed may be made by the affidavit of a subscribing witness. Powers of attorney relating to real estate must be acknowledged the same as deeds. Deeds must be recorded in the county where the property lies. No deed or contract relating to the real estate by a wife is binding upon her, unless duly acknowledged on separate examination.

RHODE ISLAND—Deeds must be written, signed and sealed—a scroll is not sufficient—Witnesses are not necessary. Acknowledgments may be made before a senator, judge, justice of the peace, notary public, or town clerk. Out of the State, acknowledgments may be made as in New York. Deeds must be recorded in the county where the property lies. The wife must join in the execution of a deed made by the husband, to relinquish dower; the husband alone is required to acknowledge it.

SOUTH CAROLINA—Deeds must be in writing, signed—a scroll is sufficient—sealed in the presence of at least two attesting witnesses, and must be recorded in the parish where the land lies in forty days after acknowledgment. Acknowledgments in the State must be made before a trial justice or notary public; without the State, before a commissioner of this State only. Previous to the probate of a deed one of the subscribing witnesses must go before a notary public or trial justice, if in this State, or before a commissioner for this State if out of the State, and make affidavit that he saw the grantor sign, seal, and, as his act and deed, deliver that deed, and that he, with the other subscribing witness, naming him, did witness the execution thereof.

TENNESSEE—Deeds must be in writing, signed and acknowledged by the grantor or before two attesting witnesses, and recorded in the county where the land lies. Acknowledgments may be made in the State, other States and foreign countries, same as in Kentucky. Seals have been abolished. In this State, the wife has no dower in land granted in fee by the husband, and it is not necessary for her to join in the deed; if a trust deed is given, then the wife must relinquish dower by joining in the deed. In a separate estate belonging to the wife, the husband must always join her in the deed.

TEXAS—Deeds must be in writing, signed and acknowledged. If not acknowledged it must be proved by two attesting witnesses, and must be recorded in the county where the land lies. Acknowledgments may be made in the State, other States, and foreign countries as in New York.

VERMONT—Deeds must be written, sealed—a scroll is insufficient—and signed in the presence of two attesting witnesses, acknowledged and recorded in the county where the property is situated. Acknowledgments may be made before a master in chancery, a notary public, or a justice of the peace. Out of the State, as in New York.

VIRGINIA—Deeds must be in writing, signed, sealed—a scrawl is sufficient—and acknowledged and recorded in the county where the land lies, within sixty days from date

of acknowledgment. Acknowledgments may be made as in New York, or may be proved by two witnesses. An acknowledgment of a married woman must be certified to, if before a justice of the peace, by at least two justices, or by some officer having a seal.

WEST VIRGINIA—Deeds must be in writing, sealed—a scroll is sufficient—signed and acknowledged, or proved by two attesting witnesses, and recorded in the county where the land is. Acknowledgments may be made as in New York State. The wife must join with the husband in the deed to relinquish her dower.

WISCONSIN—Deeds must be in writing, signed, sealed—a scroll will answer—and executed in the presence of at least two attesting witnesses, and recorded in the county where the property lies. Acknowledgments may be made in the State, in other States, and foreign countries, before officers, as named in New York. A married woman must join in the execution of a deed to her husband's property to bar her dower. She can do this by an attorney duly appointed.

TERRITORIES.

ARIZONA—Deeds must be acknowledged, proved, or certified to in the manner as specified in Law of Deeds in Dakota. The wife must be examined separate, apart from, and without the hearing of her husband, and must acknowledge that the act is free and voluntary, and without fear or compulsion or under influence of her husband, and that she does not wish to retract the influence of the same. Right of dower and courtesy are abolished.

DAKOTA—Deeds must be in writing, duly signed by the maker, and recorded with the register of deeds of the county in which the real property affected thereby is situate. The proof or acknowledgment may be made at any place within this Territory, before a justice, clerk of the supreme court, or notary public, or may be made in the judicial district, county, subdivision, or city for which the officer was elected or appointed, before either a judge or clerk of a court of record, a mayor of a city, a register of deeds, or a justice of the peace. If without the Territory but within the United States, and within the jurisdiction of the officer, before either a justice, judge, or clerk of any court of record of the United States; or of any State or Territory; a notary public or any other officer of the State or Territory where the acknowledgment is made, authorized by its laws to take such proof or acknowledgment, or by a commissioner appointed for the purpose by the governor of this Territory, pursuant to the Political Code. Without the United States, before either a minister, commissioner, or *charge d'affaires* of the United States, resident and accredited in the country where the proof or acknowledgment is made; a consul, vice-consul, or consular agent of the United States resident in the country where the proof or acknowledgment is made; a judge of a court of record of the country where such proof or acknowledgment is made; or a notary public of such country. When any of the officers above mentioned are authorized by law to appoint a deputy, the acknowledgment or proof may be taken by such deputy in the name of his principal. Proof of the execution of an instrument, when not acknowledged, may be made either by the party executing it, or either of them, or by a subscribing witness, or by other witnesses in certain cases. A conveyance by a married woman has no validity until acknowledged. Officers taking and certifying acknowledgments or proof of instruments for record must authenticate their certificates by affixing thereto their signatures, followed by the names of their offices; also their seals of office, if by the laws of the Territory, State, or country where the acknowledgment or proof is taken, or by authority of which they are acting, they are required to have official seals. Judges and clerks of courts of record must authenticate their certificates as aforesaid, by affixing thereto the seal of their proper court; and mayors of cities by the seal thereof. No certificate of the official character of the officer is needed, when the acknowledgment is taken out of the Territory. Conveyance may be made by husband to wife, or wife to husband; all rights of dower or courtesy are abolished. The wife need not join in a conveyance of land belonging to her husband, nor is it necessary that the husband shall join in conveyance of land belonging to his wife; except homesteads, in which case, if the owner is married, and both husband and wife are residents of the Territory, both must concur in and sign the same joint instrument.

IDAHO—Deeds must be in writing, signed and sealed—a scroll will answer—witnesses are not required—and duly acknowledged or proved and certified to. Acknowledgments same as in Dakota. A husband and wife may, by their joint deed, convey the real estate of the wife. The wife must be examined apart from, and without the hearing of her husband, and must acknowledge that the act is free and voluntary, and without fear or compulsion, or under influence of her husband, and that she does not wish to retract the execution of the same. No rights of courtesy or dower allowed.

NEW MEXICO—Deeds must be in writing, signed, sealed—a scroll is a seal—and duly proved or acknowledged, and duly recorded in the county where the real estate is situate. Acknowledgments may be made as in Dakota. A married woman may convey her real estate by a conveyance executed by herself and her husband, and the acknowledgment made by her must show that she was personally known to the officer taking the same, or her identity proven by at least two reliable witnesses, and that she was informed of the contents of the conveyance, and that she confessed on an examination independent of, separate and apart from, her husband, that she executed such conveyance voluntarily and without compulsion or the illicit influence of her husband. The husband must join, and the acknowledgment be in the form below, otherwise no title passes even as against herself. The examination of the wife separate, apart, and independent of her husband is necessary, but she need only join with her husband when the property is her own, or when she has an interest therein in her own right independent of her husband.

UTAH—Deeds must be written, signed, sealed—a scroll is sufficient—and attested by one credible witness, and acknowledged or proved. A deed must be recorded in the recorder's office of the proper county. Acknowledgment in the Territory or other States and countries as in Dakota. A married woman may convey her real estate as if a *femme sole*. Dower is abolished.

WASHINGTON—Deeds must be in writing, signed and sealed—a scrawl is a seal—by the maker thereof, witnessed by two witnesses. Acknowledgments may be made as in Dakota, both in the Territory, other States, or foreign countries. A married woman shall not be bound by any deed affecting her real estate or releasing dower, unless she is joined in the conveyance by her husband, and shall, upon examination by the officer taking the acknowledgment, separate and apart from her husband, acknowledge that she executed the deed of her own free will, and without fear or coercion by her husband. The officer must certify that he has made known to her the contents of the deed. Dower and tenancy by the courtesy are abolished.

WYOMING—Deeds must be made in writing under seal—a scrawl is sufficient—attested by two witnesses, acknowledged before some person authorized by law to take acknowledgments of deeds, as in Dakota Territory. They must be recorded in the office of the register of deeds of the county where the lands lie, within three months of the date of such instrument. A married woman may deed, mortgage, or convey her real estate in like manner as she might do if she were a *femme sole*.

DOMINION OF CANADA.

PROVINCE OF ONTARIO—Deeds must be in writing, signed and sealed—a scroll is not sufficient—and attested by two witnesses. They should be in duplicate for registration. Deeds may be proved by affidavit of one of the witnesses to said deed; said affidavit being engrossed on what is called a memorial, setting forth a digest of the principal

details of the deed; this memorial shall be under the hand and seal of the grantee or grantor, and is left for permanent record with the registrar of the county in which the property conveyed is situate. Within the province the affidavit to execution of deed may be taken on said memorial before the registrar of the county or his deputy, or before any judge of the Court of Queen's Bench of Ontario, or any judge of a county court, or any commissioner of the said Court of Queen's Bench in Ontario. Out of the Province, proof of deeds, conveyances, or wills may be made by affidavit (or declaration when said declaration is by law permissible) sworn before the mayor or chief magistrate of any city, borough, or town corporate in Great Britain or Ireland, under the common seal of such city, borough, or town corporate, or before the chief justice or judge of any Court of Queen's Bench in Quebec, or of the supreme court of any British colony, or before the mayor of any city, borough, or town corporate in any foreign country, or any consul or vice-consul of Her Majesty resident therein. Deeds, conveyances, judgments, etc., must be recorded in the county where property is situate, and bind lands according to priority of registration. A wife must join in a deed with the husband in selling his real estate to relinquish dower, and he must join with her in selling her separate real estate, acquired previous to, or subsequent to marriage.

PROVINCE OF NEW BRUNSWICK—Deeds must be in writing, signed, sealed—a scroll is not sufficient—and witnessed by at least one attesting witness. The law governing acknowledgments is similar to that of Ontario. A conveyance, or power of attorney for the same, by a married woman, of all her right and interest in land jointly with her husband, shall be valid if executed without compulsion from him, and the person authorized by law to take acknowledgments of conveyances in other cases, certifying thereon that he has examined her apart from her husband, and that she acknowledged that she executed the conveyance freely.

QUIT-CLAIM DEED.

THIS INDENTURE, made..... in the year of our Lord..... between (name, occupation, and residence of grantor) of the first part, and (name, occupation, and residence of grantee) of the second part, witnesseth, that the said party of the said part, for, and in consideration of the sum of..... lawful money of the United States of America, to him in hand paid by the said party of the second part, at or before the sealing and delivery of these presents, the receipt whereof is hereby acknowledged, has remised, released, and quit-claimed, and by these presents does remise, release, and quit-claim, unto the said party of the second part, and his heirs and assigns forever, all—

(Here insert an accurate description of the property granted.)

TOGETHER with all and singular the tenements, hereditaments, and appurtenances thereto belonging or in any wise appertaining, and the reversion and reversions, remainder and remainders, rents, issues, and profits thereof. And also all the estate, right, title, interest, property, possession, claim, and demand whatsoever, as well in law as in equity, of the said party of the first part, of, in, or to the above-described premises, and every part and parcel thereof, with the appurtenances. To have and to hold, all and singular the above mentioned and described premises, together with the appurtenances, unto the said party of the second part, and his heirs and assigns forever.

IN WITNESS WHEREOF, the said party of the first part has hereunto set his hand and seal the day and year first above written.

Executed and delivered in presence of

STATE OF..... } ss.
COUNTY OF..... }

On this..... day of....., in the year..... before me personally came..... who is known by me to be the individual described in, and who executed the foregoing instrument, and acknowledged that he executed the same. (Seal.)

WARRANTY DEED.

THIS INDENTURE, made the..... day of..... in the year one thousand eight hundred and..... between (name, residence, and occupation of the grantor) of the first part, and..... (name, residence, and occupation of the grantee) of the second part, witnesseth, that the said party of the first part, for and in consideration of the sum of..... lawful money of the United States, to..... in hand paid by the said party of the second part, at or before the sealing and delivery of these presents, the receipt whereof is hereby acknowledged, and the said party of the second part,..... heirs, executors, and administrators, forever released and discharged from the same, by these presents, ha..... granted, bargained, sold, aliened, remised, released, conveyed, and confirmed, and by these presents do..... grant, bargain, sell, alien, remise, release, convey, and confirm, unto the said party of the second part, and to..... heirs and assigns forever, all (here give an accurate description of property granted.)

TOGETHER with all and singular the tenements, hereditaments, and appurtenances thereto belonging or in any wise appertaining, and the reversion and reversions, remainder and remainders, rents, issues, and profits thereof. And also all the estate, right, title, interest..... property, possession, claim, and demand whatsoever, as well in law as in equity, of the said party of the first part, of, in, and to the same, and every part and parcel thereof, with the appurtenances.

TO HAVE AND TO HOLD the above granted, bargained, and described premises, with the appurtenances, unto the said party of the second part..... heirs and assigns, to..... their own proper use, benefit, and behoof forever.

AND THE SAID..... heirs, executors, and administrators, do..... covenant, grant, and agree to and with the said party of the second part..... heirs, and assigns, that the said..... at the time of sealing and delivery of these presents..... lawfully seized in..... of a good, absolute, and indefeasible estate of inheritance in fee-simple of and in all and singular the above granted and described premises, with the appurtenances..... and ha..... good right, full power, and lawful authority to grant, bargain, sell, and convey the same in manner aforesaid: And that the said party of the second part,..... heirs and assigns, shall and may at all times hereafter, peaceably and quietly have, hold, use, occupy, possess, and enjoy the above granted premises, and every part and parcel thereof, with the appurtenances, without any let, suit, trouble, molestation, eviction, or disturbance of the said party of the first part,..... heirs or assigns, or of any other person or persons lawfully claiming or to claim the same: And that the same now are free, clear, discharged, and unencumbered, of and from all former and other grants, titles, charges, estates, judgments, taxes, assessments, and encumbrances of what nature or kind so ever.

And also, that the said party of the first part, and..... heirs, and all and every person or persons whomsoever lawfully or equitably deriving any estate, right, title, or interest, of, in, or to the hereinbefore granted premises, by, from, under, or in trust for..... them, shall and will, at any time or times hereafter, upon the reasonable request, and at the proper costs and charges in the law, of the said party of the second part,..... heirs and assigns, make, do, and execute, or cause to be made, done, and executed, all and every such further and other lawful and reasonable acts, conveyances, and assurances in the law, for the better and more effectually vesting and confirming the premises hereby granted or so intended to be, in and to the said party of the second part,..... heirs and assigns forever, as by said party of the second part,..... heirs or assigns, or..... their counsel learned in the law, shall be reasonably advised or required; And the said..... heirs, the above described and hereby granted and released premises, and every part and parcel thereof, with the appurtenances, unto the said party of the second part,..... heirs and assigns, against the said party of the first part, and..... heirs, and against all and every person and persons whomsoever, lawfully claiming or to claim the same, shall and will warrant and by these presents forever defend.

IN WITNESS WHEREOF, the said party of the first part..... hereunto set..... hand..... and seal..... the day and year first above written.

(And [name of the wife of the grantor] signs and seals this deed in token of her relinquishment and release to the party of the second part of all her right of dower in the premises hereby granted.)

(Signature of grantor.) (Seal.)
(Signature of grantor's wife.) (Seal.)

Scaled and delivered in the presence of

STATE OF..... } ss.
COUNTY OF..... }

On the..... day..... in the year one thousand eight hundred and..... before me personally came..... to be the individual described in, and who executed the foregoing instrument, and..... acknowledged that..... he..... executed the same. (Signature.)

ANOTHER WARRANTY DEED—FULL COVENANT.

THIS INDENTURE, made the..... day of..... in the year one thousand eight hundred and..... between..... of the second part:

WITNESSETH, that the said party of the first part, for and in consideration of the sum of..... dollars, lawful money of the United States of America, to..... in hand paid by the said party of the second part, at or before the sealing and delivery of these presents, the receipt whereof is hereby acknowledged, and the said party of the second part,..... heirs, executors, and administrators, forever released and discharged from the same by these presents, ha..... granted, bargained, sold, aliened, remised, released, conveyed, and confirmed, and by these presents do..... grant, bargain, sell, alien, remise, release, convey, and confirm, unto the said party of the second part, and to..... heirs and assigns forever, All.....

TOGETHER with all and singular the tenements, hereditaments, and appurtenances thereto belonging, or in anywise appertaining, and the reversion and reversions, remainder and remainders, rents, issues, and profits thereof. And also, all the estate, right, title, interest,..... property, possession, claim, and demand whatsoever, as well in law as in equity, of the said party of the first part, of, in, and to the same, and every part and parcel thereof, with the appurtenances. To have and to hold the above granted bargained and described premises, with the appurtenances, unto the said party of the second part,..... heirs and assigns, to..... their own proper use, benefit, and behoof forever.....

And the said..... for..... heirs, executors, and administrators, do..... covenant, promise, and agree, to and with the said party of the second part,..... heirs and assigns, that the said..... at the time of the sealing and delivery of these presents,..... lawfully seized in..... of a good, absolute, and indefeasible estate of inheritance in fee simple, of and in all and singular the above granted and described premises, with the appurtenances,..... and ha..... good right, full power, and lawful authority to grant, bargain, sell, and convey the same in manner and form aforesaid.

And that the said party of the second part,..... heirs and assigns, shall and may at all times thereafter peaceably and quietly have, hold, use, occupy, possess, and enjoy the above granted premises, and every part and parcel thereof, with the appurtenances, without any let, suit, trouble, molestation, eviction, or disturbance of the said party of the first part,..... heirs or assigns, or of any other person or persons lawfully claiming or to claim the same. And that the same are now free, clear, discharged, and unincumbered of and from all former and other grants, titles, charges, estates, judgments, taxes, assessments, and encumbrances of what nature or kind soever..... And also, that the said party of the first part, and..... heirs, and all and every other person or persons whomsoever, lawfully or equitably deriving any estate, right, title, or interest, of, in, or to the hereinbefore granted premises, by, from, under, or in trust for..... them, shall and will at any time or times hereafter, upon the reasonable request, and at the proper costs and charges in the law, of the said party of the second part,..... heirs and assigns, make, do, and execute, or cause or procure to be made, done, and executed, all and every such further and other lawful and reasonable acts, conveyances, and assurances in the law for the better and more effectually vesting and confirming the premises hereby granted, or intended so to be, in and to the said party of the second part,..... heirs and assigns forever, as by the said party of the second part,..... heirs or assigns, or..... their counsel learned in the law, shall be reasonably devised, advised, or required.....

And the said..... heirs, the above described and hereby granted and released premises, and every part and parcel thereof, with the appurtenances, unto the said party of the second part,..... heirs and assigns, against the said party of the first part,..... heirs, and against all and every person or persons whomsoever, lawfully claiming or to claim the same, shall and will warrant and by these presents forever defend.

IN WITNESS WHEREOF, the said party of the first part ha..... hereunto set..... hand..... and seal..... the day and year first above written.

Scaled and delivered in the presence of

STATE OF..... } ss.
COUNTY OF..... }

On this..... day of..... in the year one thousand eight hundred and..... before me personally came..... to me known, and known to me to be the individual described in and who executed the foregoing instrument, and..... thereupon..... acknowledged to me that..... he..... had executed the same.

AGENCY.

In the words of Chancellor Kent: "Agency is founded upon a contract, either express or implied, by which one of the parties confides to the other the management of some business to be transacted in his name, or on his account, and by which the other assumes to do the business, and to render an account of it."

The authority of the agent may be created by deed or writing. When a deed is made by an attorney, it should be in the name of the principal; and the attorney must be appointed by deed. For the ordinary purposes of business and commerce, verbal authority, without writing, is sufficient.

Where the principal, with knowledge of all the facts, adopts or acquiesces in the acts done under an assumed agency, he cannot be heard afterwards to impeach them, under the pretense that they were done without authority, or even contrary to instructions.

A general agent is one employed by his principal to transact all his business of a particular kind, or at a particular place.

A special agent is one constituted for a particular purpose, and under a limited power.

Every contract made with an agent in relation to the business of the agency is a contract with the principal, entered into through the instrumentality of the agent, provided the agent acts in the name of his principal.

An agent is bound to the utmost good faith, and to use all the care and diligence which a reasonable man would use in his own business.

He is responsible for any injury to his principal due to his (the agent's) breach of duty.

If an agent embezzles his principal's property, the principal may reclaim it whenever or wherever it can be distinctly traced or identified.

Ordinarily an agent has not power to employ a sub-agent to do the business, without the knowledge or consent of his principal.

The death of the principal determines the authority of his agent.

By a letter or power of attorney, one or more persons, called the constituent or constituents, authorizes in writing one or more persons, called the attorney or attorneys, to do some lawful act by the latter, for or instead and in the place of the former.

The authority may be general, to transact all the business of the constituent, or special, to do some particular business.

Power of attorney may be either parol or under seal.

POWER OF ATTORNEY.

KNOW ALL MEN BY THESE PRESENTS, that I, of have constituted, ordained, and made, and in my stead and place put, and by these presents do constitute ordain, and make, and in my stead and place put, to be my true, sufficient, and lawful attorney for me and in my name and stead to

Giving and hereby granting unto him, the said attorney, full power and authority in and about the premises; and to use all due means, course, and process in law, for the full, effectual, and complete execution of the business afore described; and in my name to make and execute due acquittance and discharge; and for the premises to appear, and the person of me the constituent to represent before any governor, judges, justices, officers, and ministers of the law whatsoever, in any court or courts of judicature, and there on my behalf, to answer, defend, and reply unto all actions, causes, matters, and things whatsoever relating to the premises. Also to submit any matter in dispute, respecting the premises, to arbitration or otherwise; with full power to make and substitute, for the purposes aforesaid, one or more attorneys under him, my said attorney, and the same again at pleasure to revoke. And generally to say, do, act, transact, determine, accomplish, and finish all matters and things whatsoever relating to the premises, as fully, amply, and effectually, to all intents and purposes, as I, the said constituent, if present, ought or might personally, although the matter should require more special authority than is herein comprised, I, the said constituent ratifying, allowing, and holding firm and valid all whatsoever my said attorney or his substitutes shall lawfully do, or cause to be done, in and about the premises, by virtue of these presents.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this day of in the year of our Lord eighteen hundred and

(Signature.) (Seal.)

Signed, sealed, and delivered in presence of

A SHORT FORM.

KNOW ALL MEN BY THESE PRESENTS, that I, have made, constituted, and appointed, and by these presents do make, constitute, and appoint my true and lawful attorney, for me and in my name, place, and stead to

Giving and granting unto my said attorney full power and authority to do and perform all and every act and thing whatsoever requisite and necessary to be done in and about the premises, as fully, to all intents and purposes, as I might or could do if personally present, with full power of substitution and revocation; hereby ratifying and confirming all that my attorney or his substitute shall lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, I have hereunto set my hand and seal, the day of in the year one thousand eight hundred and

(Signature.) (Seal.)

Executed and delivered in presence of

POWER TO RECEIVE A DEBT.

KNOW ALL MEN BY THESE PRESENTS, that I, of have made, nominated, and appointed my true and lawful attorney for me and in my name, and for my use and benefit, to ask, demand, and receive of of all sums of money, debts, and demands whatsoever, which are now due and owing to me, the said from the said and upon receipt thereof, to make and deliver a release or discharge for the same; and I do hereby ratify and confirm whatsoever my said attorney shall lawfully do in the premises.

IN WITNESS WHEREOF, I have hereunto set my hand and seal, this day of in the year one thousand eight hundred and

(Signature.) (Seal.)

Signed, sealed, and delivered in presence of

REVOCATION OF POWER OF ATTORNEY.

WHEREAS, I, of the of in the county of and State of by my certain power of attorney, bearing date the day of in the year one thousand eight hundred and, did appoint of the my true and lawful attorney, for me and in my name, to as by the said power of attorney, reference thereto being had, will more fully appear:

THEREFORE, KNOW ALL MEN BY THESE PRESENTS, That I, aforesaid, have countermanded and revoked, and by these presents do countermand and revoke the said power of attorney and all power and authority given to the said

IN WITNESS WHEREOF, I have hereunto set my hand and seal, this day of one thousand eight hundred and

(Signature.) (Seal.)

Sealed and delivered in presence of

BONDS.

A bond is an obligation in writing and under seal, by which the maker, who is called, in legal phraseology, the obligor, binds himself, his heirs, executors, and administrators, to pay to the other party, called the obligee, a certain sum of money.

The conditional bond is the most used. It is so called because it expresses a condition which, if performed by the obligor, frees him from the obligation named in the bond, and consequently makes the bond void.

The certain sum of money to be paid by the obligor in case of his failure to perform the condition named in the bond, which is called the penal sum or penalty of the bond, is usually double the sum mentioned in the condition, where the condition is to pay money.

The bond is an absolute obligation if the condition becomes impossible.

In this case the right of the obligee is to recover the damages which he has sustained by the breach of the condition, with interest and costs, and the amount must not exceed the penalty of the bond. This doctrine has superseded the harsh doctrine formerly enforced, which required the obligor to pay to the obligee the full amount of the penalty when the bond became an absolute obligation.

No particular form of words is required in a bond, but the intention of the parties must be clearly expressed.

It must be in writing, on paper or parchment, under seal, and be delivered. Like a deed, its effect dates from the date of delivery.

The effects of the seal on an instrument are that it imparts a consideration, and takes it out of the effect of the Statute of Limitations.

BOND—SHORT FORM.

KNOW ALL MEN BY THESE PRESENTS, that held and firmly bound unto in the sum of dollars, lawful money of the United States of America, to be paid to the said or assigns: For which payment, well and truly to be made, bind firmly by these presents.

Sealed with seal. Dated the day of one thousand eight hundred and

The condition of the above obligation is such, that if the above bounden shall well and truly pay, or cause to be paid, unto the above named or assigns, the just and full sum of on the day of which will be in the year one thousand eight hundred and, and the interest thereon, to be computed from at and after the rate of per cent per annum, to be paid then the above obligation to be void, otherwise to remain in full force and virtue.

Sealed and delivered in the presence of

STATE OF } ss.
COUNTY OF }

On this day of in the year one thousand eight hundred and before me personally came to me known, and known to me to be the individual described in, and who executed the foregoing instrument, and he thereupon duly acknowledged to me that he had executed the same.

BOND—INDIVIDUAL,—TIME OF PAYMENT PRINTED.—INTEREST, INSURANCE, TAX, ASSESSMENT, AND RECEIVER'S CLAUSES.

KNOW ALL MEN BY THESE PRESENTS, that held and firmly bound unto in the sum of dollars, lawful money of the United States of America, to be paid to the said executors, administrators, or assigns: For which payment, well and truly to be made, bind heirs, executors, and administrators firmly by these presents. Sealed with seal. Dated the day of one thousand eight hundred and

The condition of the above obligation is such, that if the above bounden heirs, executors, or administrators, shall well and truly pay, or cause to be paid, unto the above named executors, administrators, or assigns, the just and full sum of on the day of which will be in the year one thousand eight hundred and and the interest thereon, to be computed from at and after the rate of per cent per annum, to be paid then the above obligation to be void, otherwise to remain in full force and virtue.

AND IT IS HEREBY EXPRESSLY AGREED, that should any default be made in the payment of the said interest, or of any part thereof, on any day whereon the same is made payable as above expressed, or should any tax or assessment be hereafter levied or imposed, or become a lien or charge upon the premises described in the mortgage accompanying this bond, and become due or payable, and should the said interest remain unpaid and in arrear for the space of days, or said tax or assessment remain unpaid and in arrear for then and from thenceforth, that is to say, after the lapse or expiration of either one of the said periods, as the case may be, the aforesaid principal sum of with all arrearage of interest thereon, shall, at the option of the said legal representatives or assigns, become and be due and payable immediately thereafter, although the period above limited for the payment thereof may not then have expired, anything hereinbefore contained to the contrary thereof in anywise notwithstanding.

And it is further understood and agreed, that if default shall be made in the payment of said principal sum, or any part thereof, or of any interest which shall accrue thereon, or any part thereof, or of any taxes and assessments on the premises above referred to, or any part thereof; or of the interest thereon, or any part thereof, at the respective times herein specified for the payment thereof, the said obligee legal representatives or assigns, shall have the right forthwith, after any such default, to enter upon and take possession of the said mortgaged premises, and receive the rents, issues, and profits thereof, and apply the same, after payment of all necessary charges and expenses, on account of the principal and interest of this bond, and the mortgage accompanying the same; and the said obligee legal representatives or assigns, shall be at liberty and have the right immediately after any such default, upon a complaint filed or any other legal proceedings commenced for the foreclosure of said mortgage, to apply for and shall be entitled as a matter of right, and without regard to the value of the premises, or the solvency or the insolvency of said obligor or any owner of the mortgaged premises, and on eight days notice to said obligor legal representatives or assigns, in any court of competent jurisdiction, to have granted a receiver of the rents, issues, and profits of the said mortgaged premises, with power to lease said premises for a term to be approved by the Court, with power to pay taxes and assessments which are or may become a lien on said premises, and keep the same insured, and with power to take proceedings to dispossess tenants, and make all necessary repairs, and with such other powers as may be deemed necessary; who, after deducting all charges and expenses attending the execution of the said trust as receiver, shall apply the residue of said rents and profits to the payment and satisfaction of this bond, and the mortgage accompanying the same, or to any deficiency which may arise after applying the proceeds of the sale of said premises to the amount due, including interest and costs, and expenses of the foreclosure and sale.

And it is also agreed by and between the parties to these presents, that the said part of the first part shall and will keep the buildings erected and to be erected upon the lands in the mortgage made contemporaneously with and collateral to this bond described, insured against loss or damage by fire in and by some incorporated company to be selected or approved by the part of the second part, legal representatives or assigns, and in an amount to be approved by the said part of the second part, legal representatives or assigns, and assign the policies and certificates thereof to the said part of the second part, or assigns, as further collateral security for the payment of the principal and interest aforesaid; and, in default thereof, it shall be lawful for the said part of the second part, legal representatives or assigns, to effect such insurance, and the premium and premiums paid for effecting the same, with interest thereon, shall be a lien on the said mortgaged premises and shall be added to the amount of this bond or obligation, and be secured by these presents, and be payable on demand, with interest at the rate of per cent per annum.

Sealed and delivered in the presence of

STATE OF..... } ss.
COUNTY OF..... }

On this..... day of..... in the year one thousand eight hundred and..... before me personally came..... to me known, and known to me to be the individual..... described in, and who executed the foregoing instrument, and ..he.. thereupon..... duly acknowledged to me that ..he.. had executed the same.

CONDITION OF A BOND TO CONVEY LAND.

The condition of this obligation is such, that if the said..... upon the payment of..... dollars and interest by said..... within one year from this date, shall convey to said..... and his heirs forever, a certain parcel of land with the buildings thereon, situate in..... bounded and described as follows: by a warranty deed in common form, duly executed and acknowledged, the premises then being in as good condition as they now are, necessary decay and deterioration excepted, then this obligation shall be void.

Executed and delivered
In presence of

..... [L.S.]

BOND WITH SURETIES.

KNOW ALL MEN BY THESE PRESENTS, that we,..... as principal, and..... and..... as sureties, all of..... in the County of..... State of..... are holden and stand firmly bound unto..... of said..... in the sum of..... dollars, to be paid to the said..... to the payment whereof we jointly and severally bind ourselves and our respective heirs, firmly by these presents. Sealed with our seals.

Dated at..... this..... day of....., A. D. 18.....

The condition of this (as first form)

Executed and delivered

In presence of

..... [L.S.]
..... [L.S.]
..... [L.S.]

ASSIGNMENT OF BOND.

KNOW ALL MEN BY THESE PRESENTS, that..... of the first part, for and in consideration of the sum of..... lawful money of the United States of America, to..... in hand paid by..... of the second part, at or before the enrolling and delivery of these presents, the receipt whereof is hereby acknowledged, ha.. bargained, sold, and assigned, and by these presents do.. bargain, sell, and assign, unto the said party of the second part,..... executors, administrators, and assigns, a certain written bond or obligation and conditions thereof, bearing date the..... day of..... one thousand eight hundred and..... executed by.....

and all sum and sums of money due, and to grow due thereon: And the said party of the first part do.. covenant with the said party of the second part, that there is now due on the said bond or obligation, according to the conditions thereof, for principal and interest, the sum of..... and do.. hereby authorize the said party of the second part, in..... name to ask, demand, sue for, recover, receive, and enjoy the money due and that may grow due thereon, as aforesaid.

IN WITNESS WHEREOF,..... have hereunto set..... hand. and seal. the..... day of..... one thousand eight hundred and.....

Sealed and delivered in the presence of

MORTGAGES.

A legal mortgage is defined by Bouvier to be "a conveyance by deed of lands by a debtor, called the mortgagor, to his creditor, called the mortgagee, as a pledge and security for the payment of money borrowed, or the performance of a covenant, with the proviso that the conveyance shall be void on the payment of the money and interest on a certain day, or the performance of the covenant by the time appointed; by which the conveyance of the land becomes absolute at law; yet the mortgagor has an equity of redemption; that is, a right in equity to perform the agreement in a reasonable time, and to call for a reconveyance of the land."

The parties to a mortgage must be capable of contracting, and the deed must be in writing and under seal.

Usually the condition of the mortgage is inserted in the deed.

In other cases the grantee, by what is called a deed of defeasance, agrees to reconvey the land to the grantor, on his paying a certain sum of money.

When a deed of defeasance is given both it and the mortgage must be recorded, because the two constitute but one contract.

The common law doctrine, that the failure by the mortgagor to perform the condition of the mortgage conveyed the estate absolutely to the mortgagee, has given place in the various States to the doctrine that the mortgagor has an equity of redemption, giving him a stated period in which to pay his debt to the mortgagee, with interest and costs, and thereby secure the reconveyance of the estate to himself.

The mortgagor's equity of redemption may be sold by him. He may give a second mortgage on it. His creditors may attach it. In the event of his bankruptcy it becomes a part of his assets.

Mortgages usually provide that the mortgagor shall retain possession of the lands mortgaged. Failing this, the mortgagee has the right of possession.

A bond or note is usually given with the mortgage, to be secured by it. The mortgage is discharged when this debt is paid. A proviso in the mortgage that when the debt named in the bond or note shall be paid the mortgage shall be void, bars a claim for the amount against the mortgagor personally; the grantee can then only enforce his remedy against the land.

To foreclose a mortgage, the mortgagee enters upon the mortgaged property at the time stipulated in the deed, the mortgagor having failed to perform the condition. The equity of redemption enjoyed by the mortgagor dates from said entry. It is usually three years.

Agreements as to insurance and property in houses erected on the mortgaged lands, etc., during the continuance of the mortgage should be incorporated in the mortgage deed.

The statutes differ in the different States as to the release and discharge of a mortgage.

A mortgage may be given for future advances, and for a contingent debt, as well as for a debt already incurred.

A common form of mortgage provides for the sale of the mortgaged lands upon the failure of the mortgagor to perform the condition. When this is done the mortgagee, having reserved the amount of his debt, interest, and costs, hands the balance over to the mortgagor. This form of mortgage, known as a sale mortgage, of course precludes the equity of redemption.

MEMORANDUM OF APPLICATION FOR A LOAN.

(Name of place)..... 18..

THE UNDERSIGNED desires to procure a loan of \$..... at..... per cent interest per annum, from..... on mortgage for..... year, secured by the Board of..... on the property described as follows:

Location,..... Distance from the corner of the nearest cross street,..... Dimensions of Ground,..... Value of Ground, \$....., Dimensions of Building,..... Value of Building, \$....., Building Materials,....., Total, \$....., Present Use,....., Annual Rent, \$....., Insured for, \$.....

REMARKS:

A PROMISSORY NOTE, TO BE SECURED BY MORTGAGE.

..... 18..

..... for value received..... promise to pay to..... dollars, at..... with interest at the rate of..... per cent per annum.

This note is secured by a deed of mortgage of even date herewith from..... to.....

\$.....

(Signature.)

SHORT DEED OF MORTGAGE IN USE IN INDIANA.

THIS INDENTURE WITNESSETH, that I,..... of..... etc., do hereby mortgage and warrant to..... of..... etc., the following real estate, in..... County, in the State of Indiana, to wit: to secure the payment when..... become due of..... and the mortgagor expressly agrees to pay the sum of money above secured, without relief from valuation laws.

IN WITNESS WHEREOF, the mortgagor has hereunto set his hand and seal this..... day of..... A.D. 18..

(Signature.) (Seal.)

STATE OF INDIANA, } ss.
COUNTY..... }

BEFORE ME,..... in and for said County, this..... day of....., 18..,..... acknowledged the execution of the annexed mortgage.

WITNESS MY HAND and..... seal, this..... day of....., 18..

(Signature.) (Seal.)

MORTGAGE.—INDIVIDUAL.—TIME OF PAYMENT PRINTED.

THIS INDENTURE, made the..... day of..... in the year one thousand eight hundred and..... between..... of the second part:

WHEREAS, the said..... justly indebted to the said part.... of the second part, in the sum of..... dollars, lawful money of the United States of America, secured to be paid by..... certain bond or obligation, bearing even date with these presents, in the penal sum of..... dollars, lawful money as aforesaid, conditioned for the payment of the said first-mentioned sum of..... dollars, lawful money as aforesaid, to said part.... of the second part,..... executors, administrators, or assigns, on the..... day of..... which will be in the year one thousand eight hundred and..... and interest thereon to be computed from..... at and after the rate of..... per cent per annum, to be paid

As by the said bond or obligation, and the condition thereof, reference being thereunto had, may more fully appear: NOW THIS INDENTURE WITNESSETH, that the said part.... of the first part, for the better securing the payment of the said sum of money mentioned in the condition of the said bond or obligation, with interest thereon, according to the true intent and meaning thereof, and also, for and in consideration of the sum of one dollar, to..... in hand paid by the said part.... of the second part, at or before the enrolling and delivery of these presents, the receipt whereof is hereby acknowledged, ha.. granted, bargained, sold, aliened, released, conveyed, and confirmed, and by these presents do.. grant, bargain, sell, alien, release, convey, and confirm, unto the said part.... of the second part, and to..... heirs and assigns, forever, All.....

Together with all and singular the tenements, hereditaments, and appurtenances thereunto belonging, or in anywise appertaining, and the reversion and reversions, remainder and remainders, rents, issues, and profits thereof. And also, all the estate, right, title, and interest..... property, possession, claim, and demand whatsoever, as well in law as in equity, of the said part.... of the first part, of, in and to the same, and every part and parcel thereof, with the appurtenances. To have and to hold the above granted, bargained, and described premises, with the appurtenances, unto the said part.... of the second part,..... heirs and assigns, to..... their own proper use, benefit, and behoof forever. Provided always, and these presents are upon this express condition, that if the said part.... of the first part..... heirs, executors, or administrators, shall well and truly pay unto the said part.... of the second part,..... executors, administrators, or assigns, the said sum of money mentioned in the condition of the said bond or obligation, and the interest thereon, at the time, and in the manner mentioned in the said condition, according to the true intent and meaning thereof, that then these presents, and the estate hereby granted, shall cease, determine, and be void.

And the said..... heirs, executors, and administrators do covenant and agree to pay unto the said part.... of the second part,..... executors, administrators, or assigns, the said sum of money and interest, as mentioned above, and expressed in the condition of the said bond. And if default shall be made in the payment of the said sum of money above mentioned, or the interest that may grow due thereon, or of any part thereof, that then and from thenceforth it shall be lawful for the said part.... of the second part,..... executors, administrators, and assigns, to enter into and upon all and singular the premises hereby granted, or intended so to be, and to sell and dispose of the same, and all benefit and equity of redemption of the said part.... of the first part,..... heirs, executors, administrators, or assigns therein, at public auction, according to the Act in such case made and provided.

And as the attorney.... of the said part.... of the first part, for that purpose by these presents, duly authorized, constituted, and appointed, to make and deliver to the purchaser or purchasers thereof a good and sufficient deed or deeds of conveyance in the law for the same, in fee simple, and out of the money arising from such sale to retain the principal and interest which shall then be due on the said bond or obligation, together with the costs and charges of advertisement and sale of the said premises, rendering the overplus of the purchase money (if any there shall be) unto the said..... of the first part,..... heirs, executors, administrators, or assigns, which sales, so to be made, shall forever be a perpetual bar, both in law and equity, against the said part.... of the first part,..... heirs and assigns, and against all other persons claiming or to claim the premises, or any part thereof, by, from, or under..... them or either of them.

IN WITNESS WHEREOF, the said part.... of the first part to these presents ha... hereunto set... hand... and seal... the day and year first above written.

Sealed and delivered in presence of

STATE OF..... } ss.

COUNTY OF..... }

On this..... day of..... in the year one thousand eight hundred and..... before me personally came..... to me known, and known to me to be the individual... described in and who executed the foregoing instrument, and... thereupon..... acknowledged to me that... he... had executed the same.

MORTGAGE DEED, WITH POWER OF SALE, AND RELEASE OF DOWER AND HOMESTEAD.

THIS INDENTURE made the..... day of....., in the year one thousand eight hundred and....., between..... of....., of the first part, and..... of....., of the second part, witnesseth, that the said party of the first part, in consideration of..... dollars to him paid, the receipt whereof is hereby acknowledged, hath granted, bargained, sold, released, and conveyed, and by these presents does grant, bargain, sell, release, and convey to the said party of the second part, and his heirs and assigns forever, all that (here describe property), with all hereditaments and appurtenances thereto appertaining.

To have and to hold the said premises, with the appurtenances, to said party of the second part, his heirs and assigns, to his and their use and behoof forever. Provided always, and these presents are upon condition, that if said party of the first part, his heirs or assigns, shall pay to the said party of the second part, his executors, administrators, or assigns, the sum of..... dollars, on or before the..... day of....., in the year..... with interest, according to the condition of a bond (or note) of the said..... to the said....., bearing even date herewith, then these presents shall be void.

But upon any default in the payment of the money above mentioned, or of the interest thereon, said grantee, his executors, administrators, or assigns, may sell the above granted premises with all improvements that may be thereon, at public auction in said....., first publishing a notice of the time and place of sale once each week for three successive weeks, in one or more newspapers published in said.....; and in his or their own name or names, as the attorney of the said grantor, may convey the same by proper deed or deeds to the purchaser or purchasers, absolutely and in fee simple; and such sale shall forever bar the grantor, and all persons claiming under him, from all right and interest in the granted premises, whether at law or in equity. And out of the money arising from such sale, the said grantee or his representatives shall be entitled to retain all sums then secured by this deed, whether then or thereafter payable, including all costs, charges, and expenses incurred or sustained by reason of any failure or default, on the part of the said grantor or his representatives, to perform and fulfill the condition of this deed, or any covenants or agreements herein contained; rendering the surplus, if any, together with an account of such costs, charges, and expenses, to the said grantor, his heirs or assigns.

And it is agreed, that said grantee, his administrators, executors, or assigns, or any person or persons in his or their behalf, may purchase at any sale made as aforesaid, and that no other purchaser shall be answerable for the purchase money; and that, until default in the performance of the condition of this deed, the grantor and his heirs and assigns may hold and enjoy the granted premises and receive the rents and profits thereof.

And, for the consideration aforesaid, I, M. B., wife of the said A. B., do hereby release unto the said grantee, and his heirs and assigns, all right of both dower and homestead in the granted premises.

IN WITNESS WHEREOF, the parties to these presents have hereunto set their hands and seals, the day and year above written.

A. B. [L. S.]
M. B. [L. S.]

Signed, sealed, and delivered

In presence of

[Witnessed and acknowledged like any other deed.]

MORTGAGE—INTEREST, INSURANCE, TAX, ASSESSMENT, WARRANTY, AND RECEIVER'S CLAUSES.

THIS INDENTURE, made the..... day of..... in the year one thousand eight hundred and..... between..... of the second part:

WHEREAS, the said..... justly indebted to the said part.... of the second part, in the sum of..... dollars, lawful money of the United States of America, secured to be paid by..... certain bond or obligation, bearing even date with these presents, in the penal sum of..... dollars, lawful money as aforesaid, conditioned for the payment of the said first mentioned sum of..... dollars, lawful money as aforesaid, to the said part.... of the second part,..... executors, administrators, or assigns, on the..... day of..... which will be in the year one thousand eight hundred and..... and interest thereon to be computed from..... at and after the rate of..... per cent per annum, to be paid.....

AND IT IS THEREBY EXPRESSLY AGREED, that should any default be made in the payment of the said interest, or of any part thereof, on any day whereon the same is made payable, as above expressed, or should any tax or assessment be hereafter imposed upon the premises hereinafter described and become due or payable, and should the said interest remain unpaid and in arrear for the space of..... days, or such tax or assessment remain unpaid and in arrear for..... then and from thenceforth, that is to say, after the lapse of either one of said periods, as the case may be, the aforesaid principal sum, with all arrearage of interest thereon, shall, at the option of the said part.... of the second part,..... administrators or assigns, become and be due and payable immediately thereafter, although the period above limited for the payment thereof may not then have expired, anything thereinbefore contained to the contrary thereof in anywise notwithstanding: As by the said bond or obligation, and the condition thereof, reference being thereunto had, may more fully appear:

NOW THIS INDENTURE WITNESSETH, that the said part.... of the first part, for the better securing the payment of the said sum of money mentioned in the condition of the said bond or obligation, with interest thereon, according to the true intent and meaning thereof, and also, for and in consideration of the sum of one dollar, to..... in hand paid by the said part.... of the second part, at or before the enrolling and delivery of these presents, the receipt whereof is hereby acknowledged, ha... granted, bargained, sold, aliened, released, conveyed, and confirmed, and by these presents do... grant, bargain, sell, alien, release, convey, and confirm, unto the said part.... of the second part, and to..... heirs and assigns forever, all.....

TOGETHER with all and singular the tenements, hereditaments, and appurtenances thereunto belonging, or in anywise appertaining, and the reversion and reversions, remainder and remainders, rents, issues, and profits thereof.

AND ALSO, all the estate, right, title, interest,..... property, possession, claim, and demand whatsoever, as well in law as in equity, of the said part.... of the first part, of, in, and to the same, and every part and parcel thereof, with the appurtenances. TO HAVE AND TO HOLD the above granted, bargained, and described premises, with the appurtenances, unto the said part.... of the second part,..... heirs and assigns, to..... their own proper use, benefit, and behoof forever.

PROVIDED ALWAYS, and these presents are upon this express condition, that if the said part.... of the first part,..... heirs, executors, or administrators, shall well and truly pay unto the said part.... of the second part,..... executors, administrators, or assigns, the said sum of money mentioned in the condition of the said bond or obligation,

and the interest thereon, at the time and in the manner mentioned in the said condition, according to the true intent and meaning thereof, that then these presents, and the estate hereby granted, shall cease, determine, and be void.

And the said..... heirs, executors, and administrators, do... covenant and agree to pay unto the said part.... of the second part,..... executors, administrators, or assigns, the said sum of money and interest, as mentioned above, and expressed in the condition of the said bond.

And if default shall be made in the payment of the said sum of money above mentioned, or the interest that may grow due thereon, or of any part thereof, or the taxes or assessments on the premises hereby granted, that then and from thenceforth it shall be lawful for the said part.... of the second part,..... executors, administrators, and assigns, to enter into and upon all and singular the premises hereby granted or intended so to be, and to sell and dispose of the same, and all benefit and equity of redemption of the said part.... of the first part,..... heirs, executors, administrators, or assigns therein, at public auction, according to the Act in such case made and provided.

And as the Attorney... of the said part.... of the first part, for that purpose by these presents duly authorized, constituted, and appointed, to make and deliver to the purchaser or purchasers thereof a good and sufficient deed or deeds of conveyance in the law for the same, in fee simple, and out of the money arising from such sale to retain the principal and interest which shall then be due on the said bond or obligation, together with the costs and charges of advertisement and sale of the said premises, rendering the overplus of the purchase money (if any there shall be) unto the said..... of the first part,..... heirs, executors, administrators, or assigns, which sale, so to be made, shall forever be a perpetual bar, both in law and equity, against the said part.... of the first part,..... heirs and assigns, and against all other persons claiming or to claim the premises, or any part thereof, by, from, or under..... them or either of them.

And the said..... do... further covenant, grant, promise, and agree, that..... the said part.... of the first part, shall and will make, execute, acknowledge, and deliver in due form of law, all such further or other deeds or assurances as may at any time hereafter be devised or required, for the more fully and effectually conveying the premises above described, and hereby granted, or intended so to be, unto the said part.... of the second part,..... heirs, executors, administrators, or assigns, for the purposes aforesaid, and unto all and every person or persons, corporation or corporations, deriving any estate, right, title, or interest therein, under this Indenture or the power of sale herein contained, and the above granted premises against the said part.... of the first part, and all persons claiming through..... will warrant and defend.

AND IT IS EXPRESSLY AGREED, by and between the parties to these presents, that the said part.... of the first part shall and will keep the buildings erected, and to be erected, upon the lands above conveyed, insured against loss and damage by fire, in and by some incorporated company to be selected or approved by the part.... of the second part or..... legal representatives, and in an amount to be approved by the said part.... of the second part, or..... legal representatives, and not less than..... dollars, and assign the policy and certificates thereof to the said part.... of the second part or..... legal representatives, so that, and in default thereof, it shall be lawful for the said part.... of the second part, or..... legal representatives, to effect such insurance, and the premium and premiums paid for effecting the same, with interest thereon, shall be a lien on the said mortgaged premises, added to the amount of the said bond or obligation, and secured by these presents, and payable on demand, with interest at the rate of..... per cent per annum.

And it is further expressly covenanted and agreed, by and between the parties hereto, that if default shall be made in payment of the principal sum mentioned in the condition of the said bond, or of any part thereof, or of the interest which shall accrue thereon, or of any part thereof, or of any tax or assessment, or of any part thereof, or of the interest thereon, or of any part thereof, at the respective times therein specified for the payment thereof, the part.... of the second part,..... legal representatives or assigns, shall have the right forthwith, after any such default, to enter upon and take possession of the said mortgaged premises, and receive the rents, issues, and profits thereof, and apply the same, after payment of all necessary charges and expenses, on account of this mortgage, and of the bond accompanying the same.

And the said part.... of the second part,..... legal representatives or assigns, shall be at liberty immediately after any such default, upon a complaint filed, or any other proper legal proceedings commenced for the foreclosure of this mortgage, to apply for and shall be entitled as a matter of right, and without regard to the value of the premises above described, or the solvency or insolvency of the part.... of the first part, or of any owner of said premises, and on..... days' notice to the part.... of the first part,..... heirs or assigns, to the appointment by any competent court or tribunal of a receiver of the rents, issues, and profits of said premises, with the power to lease the said premises for a term to be approved by the Court, with power to pay taxes, assessments, and water rents, which are or may become liens on said premises, and keep the same insured, and with power to take proceedings to dispossess tenants, and make all necessary repairs, and with such other powers as may be deemed necessary, who, after deducting all charges and expenses attending the execution of the said trust as receiver, shall apply the residue of the said rents and profits to the payment and satisfaction of this mortgage, and the bond accompanying the same, or to any deficiency which may arise after applying the proceeds of the sale of said premises to the amount due, including interest and costs and expenses of the foreclosure sale.

IN WITNESS WHEREOF, the said part.... of the first part to these presents ha... hereunto set... hand... and seal... the day and year first above written.

Sealed and delivered in the presence of

STATE OF..... } ss.

COUNTY OF..... }

On this..... day of..... in the year one thousand eight hundred and.....

before me personally came..... to me known, and known to me to be the individual... described in and who executed the foregoing instrument, and... thereupon..... acknowledged to me that... he... had executed the same.

ASSIGNMENT OF MORTGAGE.

I hereby assign the above (or within) mortgage to.....
WITNESS MY HAND AND SEAL, this..... of..... (Signature.) (Seal.)

ASSIGNMENT OF MORTGAGE.

KNOW ALL MEN BY THESE PRESENTS, That..... of the first part, in consideration of the sum of..... lawful money of the United States, to..... in hand paid by..... of the second part, at or before the enrolling and delivery of these presents, the receipt whereof is hereby acknowledged, ha... granted, bargained, sold, assigned, transferred, and set over, and by these presents do... grant, bargain, sell, assign, transfer, and set over unto the said part.... of the second part, a certain Indenture of Mortgage, bearing date the..... day of..... in the year one thousand eight hundred and..... made by.....

and duly recorded in the office of the..... of the..... County of..... on the..... day of..... 18... in Liber..... of Mortgages, page....., together with the bond or obligation therein described, and the money due and to grow due thereon, with the interest. TO HAVE AND TO HOLD the same unto the said part.... of the second part,..... and assigns for..... subject only to the proviso in the said Indenture of Mort-

gage mentioned. And.....do hereby make, constitute, and appoint the said part.....of the second part.....true and lawful attorney, irrevocable in.....name or otherwise, but at.....proper cost and charges, to have, use, and take all lawful ways and means for the recovery of the said money and interest: and in case of payment, to discharge the same as fully as.....might or could do if these presents were not made.

IN WITNESS WHEREOF,.....have hereunto set.....hand..and seal..the.....day of.....in the year one thousand eight hundred and.....

Scaled and delivered in the presence of

STATE OF..... } ss.
COUNTY OF.....

On this.....day of.....one thousand eight hundred and.....before me personally came.....

to me known and known to me to be the individual described in, and who executed the within assignment, and he thereupon duly acknowledged to me that..he..had executed the same.

RELEASE—PART OF MORTGAGED PREMISES.

THIS INDENTURE, made the.....day of.....in the year one thousand eight hundred and.....between.....of the second part:

WHEREAS,.....by Indenture of Mortgage, bearing date the.....day of.....one thousand eight hundred and.....recorded in the office of.....of the County of.....in Liber.....of Mortgages, page.....on the.....day of.....18....., for the consideration therein mentioned, and to secure the payment of the money therein specified, did convey certain lands and tenements of which the lands hereinafter described are part, unto.....

AND WHEREAS, the said part.....of the first part, at the request of said part.....of the second part, ha..agreed to give up and surrender the lands hereinafter described unto the said part.....of the second part, and to hold and retain the residue of the mortgaged lands as security for the money remaining due on the said mortgage, Now THIS INDENTURE WITNESSETH, that the said part.....of the first part, in pursuance of the said agreement and in consideration of.....to.....duly paid at the time of the enrolling and delivery of these presents, the receipt whereof is hereby acknowledged, ha..granted, released, quit-claimed, and set over, and by these presents do..grant, release, quit-claim, and set over unto the said part.....of the second part, all that part of the said mortgaged lands.....

TOGETHER with the hereditaments and appurtenances thereunto belonging; and all the right, title, and interest of the said part.....of the first part, of, in, and to the same, to the intent that the lands hereby conveyed may be discharged from the said mortgage, and that the rest of the lands in the said mortgage specified may remain to the said part.....of the first part as heretofore. TO HAVE AND TO HOLD, the lands and premises hereby released and conveyed to the said part.....of the second part.....heirs and assigns, to.....their own proper use, benefit, and behoof forever, free, clear, and discharged of and from all lien and claim under and by virtue of the Indenture of Mortgage aforesaid.

IN WITNESS WHEREOF, the said part.....of the first part ha..hereunto set hand..and seal..the day and year first above written.

Scaled and delivered in the presence of

STATE OF..... } ss.
COUNTY OF.....

On this.....day of.....in the year of our Lord one thousand eight hundred and.....before me personally came.....to me known, and known to me to be the individual described in and who executed the foregoing instrument, and..he..thereupon acknowledged to me that..he..had executed the same.

SATISFACTION OF MORTGAGE.

STATE OF NEW YORK,..... } ss.
COUNTY OF.....

Do HEREBY CERTIFY, that a certain Indenture of Mortgage, bearing date the.....day of.....in the year one thousand eight hundred and.....made and executed by.....and duly recorded in the office of the.....of the.....County of.....in Liber.....of Mortgages, page.....on the.....day of.....in the year one thousand eight hundred and.....at.....o'clock,.....minutes, in the.....noon is paid, and.....do hereby consent that the same be discharged of record.

Dated the.....day of.....18.....

Signed in the presence of

STATE OF NEW YORK,..... } ss.
COUNTY OF.....

On this.....day of.....one thousand eight hundred and.....before me personally came.....to me known, and known to me to be the individual described in, and who executed the above Certificate, and..he..thereupon duly acknowledged to me that..he..had executed the same.

SALE BY MORTGAGEE UNDER POWER OF SALE.—AFFIDAVIT OF DEFAULT, etc.

I,.....of, etc., the assignee of a certain mortgage deed given by.....to.....dated, etc., and recorded, etc., on oath depose and say, that default was made in the payment of the principal sum mentioned in the condition of said mortgage deed, and of the interest thereon, the said principal and six months' interest having become payable on the.....day of.....last, and not having been then or at any time paid or tendered to any person authorized to receive the same; and that pursuant to the provisions of said mortgage deed, I published on the first, eighth, and fifteenth days of.....now last past, in the ".....," a newspaper published in.....aforesaid, a notice of (which the following is a true copy: (here insert notice).

(Signature.)

NOTICE OF MORTGAGEE'S SALE.

By virtue of a power of sale contained in a certain mortgage deed given by.....to.....dated, etc., and recorded, etc., will be sold at public auction upon the premises [or, at the office of.....No.....street.....] on.....the.....day of.....18....., at 11 o'clock in the forenoon, all and singular the premises conveyed by said mortgage deed, namely: (here describe property.)

.....Assignee of said mortgage.

AFFIDAVIT OF SALE.

And I depose and say, that pursuant to said notice, and at the time and place in said notice appointed, the said default still continuing, I sold the premises conveyed by said mortgage deed, at public auction, by.....a duly licensed auctioneer, to.....of, etc., for the sum of.....dollars; which amount was bid by the said.....and was the highest bid therefor made at said auction; and I have this day, in pursuance of said power contained in said mortgage, delivered to said.....the foregoing deed of said mortgaged premises.

WITNESS MY HAND, this.....day of.....A.D. 18.....

(Signature)

LANDLORD AND TENANT.

A landlord in law is the owner of lands or houses. Tenants possess under him, and pay him rent for said possession. He is the lessor; they the lessees. The title to the lands or houses is in the lessor.

The written instrument under which the tenant holds possession of the lands or houses of the landlord is called a lease. It should contain in clear and explicit language all the conditions of the contract between the lessor and the lessee.

Leases are for years; for the life of the tenant or other person or persons; at will, to be terminated at the will of one of the parties; or by sufferance, when the landlord permits the continuance of possession by the tenant, after the period of the lease has terminated.

The tenant should agree with the landlord for the repair of the building he leases, by words to that effect in the lease, or by an agreement otherwise made. If he does not, the lessor is under no legal obligation to repair the property, however bad may be its condition. The lessee leases the property as he finds it, unless he expressly stipulates for its repair.

After having entered it, however, should he experience in it uninhabitable qualities not discernible after reasonable inquiry and investigation before his tenancy, he may leave the house; but he should protect himself by providing in the lease itself that the rent should be unpaid during any time when the house leased should be found to be uninhabitable.

In law the house is secondary to the land on which it stands; consequently rent must be paid, even should the house be destroyed or uninhabitable, unless the tenant should have protected himself by special agreement with his landlord.

In most of the States a wife can own lands and houses in her own right, and lease them if she pleases. Under the common law she could not.

A tenant is under no obligation to make general repairs in the property he occupies, unless by special agreement with the lessor.

Nor is he responsible for taxes, in the absence of an express obligation that he shall pay them.

A tenant at will cannot be evicted without notice.

The general rule in regard to notices to quit is, that these must give the tenant the same length of time as that between the intervals from one payment of rent to another. For example, a tenant paying his rent weekly, is entitled to a week's notice. A tenant should give his landlord or authorized agent the same length of notice. In New York City the rent of houses, apartments, etc., is paid in advance, thus giving the tenant the right to leave the premises he leases at any time within the period for which he has paid rent.

Provision is made in the statutes of the different States as to the length of notice which should be given a tenant when the rent is in arrear.

Whatever in the fixtures of a house the tenant has added to it and can take away, leaving the property in as good order as if he had not removed them, he has the right to remove. The man selling a house has not the same right as the departing tenant in this particular. To prevent trouble, the seller and buyer of a house should become parties to an agreement, providing what should or should not be removed from the property by the seller.

LEASE.

THIS INDENTURE, made the.....day of.....one thousand eight hundred and.....between.....of the second part,

WITNESSETH, that the said part.....of the first part ha..letten and by these presents do..grant, demise, and to farm let, unto the said part.....of the second part.....and the said part.....of the second part ha..hired and taken and by these presents do..hire and take of and from said part.....of the first part,.....

with the appurtenances, for the term of.....from the.....day of.....one thousand eight hundred and.....at the yearly rent or sum of.....to be paid in equal.....yearly payments.

And it is agreed that if any rent shall be due and unpaid, or if default shall be made in any of the covenants herein contained, then it shall be lawful for the said part.....of the first part to re-enter the said premises, and the same to have again, to re-possess and enjoy.

And the said part.....of the second part do..covenant to pay unto the said part.....of the first part the said yearly rent as herein specified.

And that at the expiration of the said term the said part.....of the second part will quit and surrender the premises hereby demised, in as good state and condition as reasonable use and wear thereof will permit, damages by the elements excepted.

And the said part.....of the first part do..covenant that the said part.....of the second part, on paying the said yearly rent, and performing the covenants aforesaid, shall and may peaceably and quietly have, hold, and enjoy the said demised premises for the term aforesaid.

LEASE.—FURNISHED HOUSE AND APARTMENTS.

THIS INDENTURE, made the.....day of.....one thousand eight hundred and.....between.....of the.....part,

WITNESSETH, that the said part.....of the first part ha..letten, and by these presents do..grant, demise, and to farm let, unto the said part.....of the second part.....

with the appurtenances, together with the furniture in the said.....a list, or schedule, or inventory of which is in possession of each party, and to which reference is hereby made, the said schedule or inventory having been examined by said parties, approved and signed by them, for the term of.....from the.....day of.....one thousand eight hundred and.....at the.....rent or sum of.....to be paid in equal.....payments.

And it is agreed that if any rent shall be due and unpaid, or if default shall be made in any of the covenants herein contained, then it shall be lawful for the said part.....of the first part to re-enter the said premises, and to remove all persons therefrom.

And the said part.....of the second.....part do..covenant to pay to the said part.....of the first part, the said yearly rent as herein specified.

And at the expiration of the said term, the said part.... of the second part will quit and surrender the premises hereby demised, in as good state and condition as reasonable use and wear thereof will permit, damages by the elements excepted.

And the part.... of the second part further expressly covenant and agree to keep the said furniture enumerated in said schedule or inventory, and which is contained in the said.... in good order, and repair at.... own proper cost and expense, and also to pay for, replace, or make good any and all damages, breakage, or loss to said furniture (excepting loss or damage by fire to said furniture), and to surrender and deliver up said furniture at the expiration of said term, the ordinary reasonable use and wear of such furniture excepted.

And the said part.... of the first part, do.... covenant that the said part.... of the second part, on paying the said yearly rent, and performing the covenants aforesaid, shall and may peaceably and quietly have, hold, and enjoy the said demised premises for the term aforesaid.

IN CONSIDERATION of the letting of the premises above mentioned to the above named.... and of the sum of one dollar to me paid by the said part.... of the first part.... do hereby covenant and agree, to and with the part.... of the first part above named, and.... legal representatives, that if default shall at any time be made by the said.... in the payment of the rent and performance of the covenants above contained on.... part to be paid and performed, that.... will well and truly pay the said rent, or any arrears thereof that may remain due, unto the said part.... of the first part, and also all damages that may arise in consequence of the non-performance of said covenants, or either of them, without requiring notice of any such default from the said part.... of the first part.

WITNESS..... hand and seal this..... day of..... in the year of our Lord one thousand eight hundred and.....

WITNESS,
STATE OF..... }
County of..... }

On the..... day of..... in the year one thousand eight hundred and..... before me personally came.....

to be the individual.... described in, and who executed the foregoing instrument and..... acknowledged that he executed the same.....

(The above new and useful form is published and supplied by W. Reid Gould, New York.)

HOUSE AGREEMENT AND MORTGAGE.

THIS AGREEMENT, made the..... day of..... in the year one thousand eight hundred and..... between..... of the first part and..... of the second part,

WITNESSETH, that the said part.... of the first part ha.... agreed to let, and hereby do.... let, and the said part.... of the second part ha.... agreed to take, and hereby do.... take.....

for the term of..... to commence on the..... day of..... 18.... and to end on the..... day of..... 18....

And the said part.... of the second part hereby covenant and agree to pay unto the said part.... of the first part the..... rent or sum of..... payable..... and to quit and surrender the premises at the expiration of the said term, in as good state and condition as reasonable use and wear thereof will permit, damages by the elements excepted; and not to assign, let, or underlet, the whole or any part of said premises, or occupy the same for any business deemed extra-hazardous, without the written consent of the said part.... of the first part, under the penalty of forfeiture and damages.

And the said part.... of the second part hereby further covenant.... that if any default be made in the payment of the said rent, or any part thereof, at the times above specified, the said part.... of the first part shall and may re-enter the said premises, and remove all persons therefrom; and the said part.... of the second part hereby expressly waive the service of any notice in writing of intention to re-enter, as provided for in the third section of an Act entitled, "An Act to abolish Distress for Rent, and for other Purposes," passed May 13, 1846.

And the said part.... of the second part, for the consideration aforesaid, and for the sum of one dollar to.... paid by the said part.... of the first part, do.... grant, bargain, and sell unto the said part.... of the first part, all and singular the goods and chattels mentioned in the schedule hereto annexed, to have and to hold the said goods and chattels forever. Upon condition, that if the said part.... of the second part shall well and truly pay, or cause to be paid, unto the said part.... of the first part, the rent above reserved, punctually, at the several times when the same shall become due as aforesaid, then the said bargain and sale shall be null and void. But in case default shall be made in the payment of the said rent, or any part thereof, at the several times mentioned as aforesaid, and shall remain unpaid five days after the same becomes due and payable, then it shall be lawful for the said part.... of the first part to take possession of the said goods and chattels, wherever the same may be found, and to sell the same at public sale (first giving three days' notice of the time and place of such sale), or so much thereof as may be necessary to pay the rent due, and the balance of rent for the whole unexpired term, whether due or not due, and all costs and expenses that may have accrued on account thereof, rendering the remaining goods and chattels, and the surplus money from said sale, if any there shall be, unto the said part.... of the second part.

AND IT IS FURTHER AGREED, between the parties to these presents, that in case the said part.... of the second part shall sell, assign, or dispose of, or attempt to sell, assign, or otherwise dispose of, the said goods and chattels, or shall attempt to remove the same from.... it shall and may be lawful for the said part.... of the first part to take possession of the same, and retain them in.... possession until the said rent shall be paid, or until default in the payment thereof. But until default be made in the payment of the said rent, the said goods and chattels (unless the said part.... of the second part shall sell, or attempt to sell or remove the same as aforesaid) shall remain in the possession of the said part.... of the second part.

IN WITNESS WHEREOF, the parties to these presents have hereunto set their hands and seals the day and year first above written.

Sealed and delivered in presence of

LANDLORD'S AGREEMENT (NOT TO UNDERLET).

THIS IS TO CERTIFY, that..... have Let and Rented unto.....

for the term of..... from the..... day of..... 18.... at the..... rent of..... dollars, payable..... The premises above mentioned, or any part thereof, shall not be let or underlet without the written consent of the Landlord, under penalty of forfeiture and damages; nor shall the same be used or occupied for any business deemed extra hazardous on account of fire, without the like consent under the like penalty.

Given under..... hand and seal the..... day of..... 18....

TENANT'S AGREEMENT (NOT TO UNDERLET).

THIS IS TO CERTIFY, that..... have Hired and Taken from.....

for the term of..... from the..... day of..... 18.... at the..... rent of..... dollars, payable..... And..... hereby promise to make punctual payment of the rent in manner aforesaid, and to quit and surrender the premises at the expiration of said term, in as good state and condition as reasonable use and wear thereof will permit, damages by the elements excepted; and engage not to let or underlet the whole or any part of the said premises, without the written consent of the Landlord, under the penalty of forfeiture and damages; and also not to use or occupy the said premises for any business deemed extra hazardous, on any account of fire, without the like consent, under the like penalty.

Given under..... hand and seal the..... day of..... 18....

IN CONSIDERATION of the Letting of the premises above described, and for the sum of one dollar.... do hereby become surety for the punctual payment of the rent, and performance of the covenants, in the above written agreement mentioned, to be paid and performed by..... and if default shall be made therein,..... hereby promise and agree to pay unto..... such sum or sums of money as will be sufficient to make up such deficiency, and fully satisfy the conditions of the said agreement, without requiring any notice of non-payment, or proof of demand being made.

Given under..... hand and seal the..... day of..... 18....

ASSIGNMENT OF LEASE.

KNOW ALL MEN BY THESE PRESENTS, that.....

for and in consideration of the sum of..... lawful money of the United States, to..... in hand paid, by..... the receipt whereof is hereby acknowledged, have sold and by these presents do.... grant, convey, sell, assign, transfer, and set over, unto the said..... a certain Indenture of Lease, bearing date the..... day of..... in the year one thousand eight hundred and..... made by.....

with all and singular the premises therein mentioned and described, and the buildings thereon, together with the appurtenances. TO HAVE AND TO HOLD the same unto the said..... assigns, from the..... day of..... for and during all the rest, residue, and remainder yet to come of and in the term of..... years mentioned in the said Indenture of Lease.

Subject, nevertheless, to the rents, covenants, conditions, and provisions therein also mentioned. AND..... do hereby covenant, grant, promise, and agree, to and with the said..... that the said assigned premises now are free and clear of and from all former and other gifts, grants, bargains, sales, leases, judgments, executions, back rents, taxes, assessments, and incumbrances whatsoever.

IN WITNESS WHEREOF,..... have hereunto set..... hand and seal this..... day of..... one thousand eight hundred and.....

Sealed and delivered in the presence of
STATE OF..... }
County of..... } ss.

On the..... day of..... one thousand eight hundred and..... before me personally came..... to me known, and known to me to be the individual described in, and who executed the foregoing instrument and he thereupon duly acknowledged to me that he had executed the same.

SURRENDER OF LEASE.

THIS INDENTURE, made the..... day of..... in the year one thousand eight hundred and..... between..... of the second part.

WHEREAS, the said part.... of the second part, by a certain Indenture of Lease bearing date the..... day of..... 18.... did demise and to farm let unto.....

NOW THESE PRESENTS WITNESS, that for and in consideration of the sum of..... dollars, paid by the said part.... of the second part to the said part.... of the first part at the sealing and delivery of these presents, the receipt whereof is hereby acknowledged, and to the intent and purpose that the said term in the said land and premises may be wholly merged and extinguished, the said part.... of the first part ha.... given, granted, and surrendered, and by these presents do.... give, grant, and surrender unto the said part.... of the second part and..... heirs, all the said lands and premises in the said Indenture of Lease contained and demised as aforesaid, and all the estate, right, title, interest, term of years, property, claim, and demand whatsoever of the said part.... of the second part, of, in, to, or out of the same, or any part or parcel thereof. TO HAVE AND TO HOLD the said land and premises to the said part.... of the second part..... heirs and assigns, to..... their own proper use and behoof. AND THE SAID part.... of the first part do.... hereby, for..... heirs, executors, and administrators, covenant and agree to and with the said part.... of the second part,..... heirs and assigns, that the said part.... of the first part ha.... not at any time heretofore made, done, committed, executed, permitted, or suffered any act, deed, matter, or thing whatsoever, whereby or wherewith, or by reason or means whereof the said lands and premises hereby assigned or surrendered, or any part or parcel thereof are, or is, or may, can or shall be in any wise impeached, charged, affected, or incumbered.

IN WITNESS WHEREOF, the said parties have hereunto set their hands and seals the day and year first above written.

LANDLORD'S AGREEMENT.

THIS IS TO CERTIFY, That I have this..... day of..... let and rented unto..... my house and lot known as Number..... in the city of..... with the appurtenances, and sole and uninterrupted use thereof, for one year, to commence on the..... day of..... next, at the yearly rent of....., payable in equal sums of..... dollars on the..... day of each and every month.

(Name.)

ONE MONTH'S NOTICE TO QUIT.

PLEASE TO TAKE NOTICE, that you are hereby required to surrender and deliver up possession of the.....

and to remove therefrom, on the..... day of..... next, pursuant to the provisions of the statute relating to the rights and duties of Landlord and Tenant.

Dated this..... day of..... 18....

To.....
Tenant in possession of the premises above specified.

....., Landlord.

NOTICE TO QUIT.

MR.....
You are hereby notified to deliver up to me the possession of the house and lot, known as No..... street, in the city of....., and to remove therefrom on the..... day of..... next, it being my intention to determine the tenancy.

....., Landlord.
(Place of residence and date.)

TENANT'S NOTICE OF LEAVING.

Mr. Take notice that I shall, on the day of next, deliver up to you the premises I now occupy as your tenant, known as No., in the city of, it being my intention to determine the tenancy.

(Place of residence and date.)

....., Tenant.

NOTICE TO QUIT BY LANDLORD, ON NON-PAYMENT OF RENT.

Mr. Sir:—I hereby give you notice to surrender and deliver up to me the possession of the house and lot known as No. street, in the city of, the rent of which you have failed and neglected to pay for the past month; and to remove therefrom at the expiration of ten days from this date, according to law.

Yours, etc.,

....., Landlord.

(Place of residence and date.)

NOTICE TO QUIT THE PREMISES OR PAY DOUBLE RENT.

(For use in New York State).

Mr. Sir:—You are hereby notified to surrender and yield up to me, on the day of next, possession of the premises in street, in the city of, which you now hold of me. In failure whereof, I shall require and insist upon double the value of the said premises, according to the statute in such case made and provided.

Yours, etc.,

....., Landlord.

(Place of residence and date.)

RENT RECEIPT.

No. RECEIVED from 18.....
for months Rent, in advance, for Dollars,
No. Street, due 1st instant. Let for one month only.
\$

ARBITRAMENT AND AWARD.

Arbitration is a mode of settling disputes concerning property, or in relation to a personal wrong, by submitting the question what shall be done by one party to satisfy the claim of the other, to the judgment of a third person or persons.

Persons to whom this question is submitted by agreement of the parties, either directly or by agent, are called arbitrators.

Their judgment is called an award.

The submission to arbitration is an agreement which may or may not be under seal, unless provided by statute that it shall be under seal. Said agreement usually states within what time the arbitrators shall meet, and the date before which their award shall be given.

The award has no force unless it is conformable to the terms of the submission. It should cover all the points stated in said terms, unless otherwise provided. Moreover, the award should be certain, possible of performance, both actually and without violation of law, reasonable, and conclusive.

The authority of arbitrators extends to the decision upon matters of fact and law covered by the terms of the submission, and is conclusive.

Arbitration is sometimes by a rule of Court, and its efficacy as a mode of settling disputes not seldom exceeds that of the judgment of a court of law or a decree of equity.

FORM OF SUBMISSION TO ARBITRATION.

KNOW ALL MEN, that we, of and of, do hereby promise and agree, to and with each other, to submit, and do hereby submit, all questions and claims between us (or any specific question or claim, describing it) to the arbitrament and determination of (here name the arbitrators), whose decision and award shall be final, binding, and conclusive on us (add if there are more arbitrators than one, and it is intended that they may choose an umpire); and, in case of disagreement between the said arbitrators, they may choose an umpire, whose award shall be final and conclusive (or add, if there be more than two arbitrators); and, in case of disagreement, the decision and award of a majority of said arbitrators shall be final and conclusive.

IN WITNESS WHEREOF, have hereunto subscribed these presents this day of one thousand eight hundred and

In presence of

(Signatures.)

ARBITRATOR'S OATH.

To be administered by a Judge of a Court of Record or a Justice of the Peace.
You severally swear, faithfully to hear and examine the matters in controversy between A. B., of the one part, and C. D., of the other part, and to make a just award, according to the best of your understanding—so help you God.

AWARD OF ARBITRATORS.

TO ALL TO WHOM THESE PRESENTS SHALL COME: We, to whom was submitted as arbitrators the matters in controversy existing between as by the condition of their respective bonds of submission, executed by the said parties respectively, each unto the other, and bearing date the day of one thousand eight hundred and more fully appears.

NOW, THEREFORE, KNOW YE, that we, the arbitrators mentioned in the said bonds, having been first duly sworn according to law, and having heard the proofs and allegations of the parties, and examined the matters in controversy by them submitted, do make this award in writing; that is to say, the said shall on or before the day of next ensuing the date hereof (here insert whatever is to be done).

And also the said arbitrators do hereby further award, that all actions depending between the said and for any matter arising or happening before their entering into said bonds of arbitration, shall from henceforth cease and determine, and be no further prosecuted or proceeded in by them or either of them, and that neither party recover costs against the other.

Finally, said arbitrators do further award, that the said and shall, within the space of days next after the date of this award, execute, each to the other, mutual releases of all actions and causes of action, suits, debts, damages, accounts, and demands whatsoever.

IN WITNESS WHEREOF, have hereunto subscribed these presents, this day of one thousand eight hundred and

In presence of

(Signatures.)

THE UNITED STATES HOMESTEAD LAW.

Liberal provision has been made by the United States Government for the encouragement of agriculture in its domain.

The principal features of its Homestead Law are as follows: A farm is conveyed to any person, either a citizen or who has declared his intention to become a citizen, provided that he has lived on it and cultivated it for the period of five years, and has obeyed certain conditions hereafter stated.

The farm or homestead conveyed contains 160 acres; if of land one-half of which has been granted to a railroad corporation, or for other purpose of public improvement, the homestead consists of but eighty acres, half of that amount, the remaining half having been already granted.

Applicant chooses the piece of land he desires to possess at any United States land office, having first ascertained at the same place what land is vacant, and having inspected it, if he thinks well to do so, which is the prudent plan to adopt. Of course if he can get the desired information elsewhere, as of a local land agent, it serves equally well.

If he prefers this plan, and has chosen the piece of land he wishes to occupy elsewhere than at the United States land office, he makes his application before the clerk of the county in which it is situated, accompanying it with an affidavit explaining why he does not appear in person.

The homesteader must begin to occupy his land within four months after his application is recorded.

His residence must thereafter be on the land, but he may absent himself from it not longer than six months of any one of the five years during which he is making good his claim to the property.

His legal residence must be on the land during the whole five years.

After six months' residence on the land, the occupier can buy it, if he is so disposed, without further delay, by paying the price of it, which never exceeds \$2.50 per acre. The minimum price is \$1.25.

The homestead is exempt from liabilities for debt during the five years in which the claim is being perfected.

The homesteader's full title is granted at any time within two years after the expiration of the five years of previous occupancy.

The claim is proved to the register of the office where the application was recorded, upon which the full title is procured from Washington, and delivered by the local register to the homesteader, for the nominal fee of four dollars.

By an act approved by the President of the United States, July 15, 1870, every person who has served loyally ninety days in the national army or navy is entitled to 160 acres of land on lands granted to railroads or appropriated for other public improvements, upon complying with the same conditions as other applicant for full title. He is thus given twice the amount of land given other applicants for the same expenditure of time and money.

LIENS.

A lien is defined to be a right to hold possession of another's property, for the satisfaction of some charge attached to it.

Mechanics and men supplying materials for buildings have a right of lien in all, or nearly all, the States of the Union. This right is provided by statutes which differ in their provisions, in the different States, and the reader is therefore referred to the statutes in force in the State in which he resides for information on the subject of builders and mechanics' liens.

The two forms appended would probably be of service, at least in the way of suggestion, in any State wherein the right of lien is legally recognized.

CERTIFICATE FOR WORK OR LABOR—MUST BE RECORDED.

I, of, hereby claim a lien upon the estate situated, to secure payment of dollars and cents, for wages due me, after deducting all just credits, for work done and performed in building (altering or repairing, or furnishing materials) said premises, according to the following bill:—
(Bill.)

..... of, is owner of said premises, and of, the contractor, under whom the work was performed.

Signature.

State of } ss., 18..
County of }

Personally appeared the above named, and made oath (or affirmed) that the foregoing certificate by him subscribed is true.

Before me,

....., Justice of the Peace.

A RELEASE AND DISCHARGE OF A MECHANIC'S LIEN.

I DO HEREBY CERTIFY, that a certain mechanic's lien, filed in the office of the clerk of the county of the day of one thousand eight hundred and at o'clock in the noon, in favor of claimant against the building and lot situated side of street, and known as No. in said street, whereof is owner, and is contractor, is discharged.

(Signature.)

..... ss. On the day of, one thousand eight hundred and before me came, who is known to me to be the individual described in, and who executed the above certificate, and acknowledged that he executed the same.

(Signature.) [SEAL.]

SALES OF REAL PROPERTY.

We append a few things which should be borne in mind by persons who buy or sell real estate.

Parties should be capable of contracting, having no legal disability.

Buying or selling real estate can be by agency. In some States the appointment of an agent to act for his principal in the purchase or sale of lands must be made by deed.

Papers conveying land must be written or printed, and signed by the parties, and generally by witnesses. In some States sealing is necessary to their validity.

A familiar principle in the law of evidence is that written contracts prove themselves; therefore, great exactness and fullness are necessary in preparing them, evidence outside of the instruments themselves not being admissible.

When a bond for a deed is given, as when only a part of the purchase money is paid, the signature of the wife of the seller is necessary to said bond, in order to bar her dower.

The purchaser who buys under a quit-claim deed should see to it that the words "sell and convey" appear in the instrument. Should a total failure of consideration afterward appear, he then possesses the right to the repayment of his money.

The cost of abstracts of title and any other proof necessary to his right to sell is borne by the seller; the fee for recording the deed is paid by the purchaser.

Abstracts of title should give the history of the property at least sixty years back, in localities which have been long settled; to trace the title back to the patent from the United States government is all that is necessary in newly-settled neighborhoods.

Other practical information on the sale and purchase of real estate will be found under preceding heads.

WILLS.

A will is a disposition of real and personal property to take effect after the death of the testator.

All persons of sound mind are competent to devise real estate, excepting infants and married women. This is the general rule, with exceptions in favor of married women under the statutes of some States.

The laws of the States differ as to who can make testaments of personal property.

Devises of real estate can be made to infants, married women, insane persons, and idiots, there being no consideration in a demise.

Nuncupative wills are those made by word of mouth, as distinguished from written wills.

The last will made by a testator is the one to which effect is given. The testator should employ the words: "This my last will and testament," or an expression to the same effect; and if he has made a will or wills previously, add, "Hereby revoking all former wills."

Wills of real estate must be in writing, and should be subscribed or acknowledged by the testator in the presence of witnesses, who subscribe their names and residences to the instrument, in the presence of each other. There is authority for modifications of this rule in some States.

The general rule is, that no person having an interest in the disposition of the testator's property should be a witness.

In legal nomenclature the word "will" has reference to the disposition of real estate, "testament" to the disposition of personal property. Real estate is devised, and personal property bequeathed.

Executors (one is sufficient) are usually appointed by the testator. These must be of legal age, and not suffer from an incapacity, as that of a confirmed drunkard, lunatic, or idiot. They may be either males or females.

Persons named by the testator as his executors are not under any obligation to accept the office.

The will of an unmarried woman who subsequently marries, is, in some States, revoked by her marriage. By common law the marriage of a male testator to whom a child is born as the fruit of the marriage, is revoked by said birth of a child. In this case the testator should make a new will.

When a testator leaves a bequest to his widow, she is entitled to this and also to her dower, unless the will expressly provides that the bequest is made to exclude her right of dower. When this is done the law provides that the widow shall take her choice of either the dower or the bequest.

A codicil is an addition or supplement to a will, and must be executed with the same solemnity.

Executors should offer the will for probate as soon as they can, and take care to conform in every respect to the statutes of the State in which the will has to be proved.

No particular form of words is necessary to the expression of a will; the simpler and clearer the language of the testator the better. The principle on which wills are construed is to aim at discovering the intention of the testator.

FORM OF WILL.

BE IT REMEMBERED, That I, of the city of in the State of Esquire, do make this my last will and testament, in manner following. That is to say:—

I order and direct that all my just debts shall be paid with convenient speed.

I give unto Mr. of said city, merchant, the amount of moneys due and owing from him to me, according to the tenor and effect of four promissory notes signed by him; viz., one dated for (spell out the amount); one dated for (spell out the amount); another dated for (spell out the amount); and another dated for (spell out the amount); and I order said four notes to be canceled.

To the wife of said I give an annuity of six hundred dollars, to be paid her in two equal and half-yearly payments of three hundred dollars each.

It is my will, and I order and direct that a trust fund of ten thousand dollars shall be raised out of my estate and invested at interest, the income and produce of which trust fund I give unto of single woman, to be paid to her half-yearly during

her natural life. And at the decease of the said the principal sum or trust fund shall be paid to and among such person and persons in such shares and portions as she, the said by any writing by her signed in the presence of two or more credible witnesses, shall give, direct, and appoint. And in default of such appointment, then said trust fund or principal sum shall go, as the residue of my estate, to the residuary legatee hereinafter named.

I also direct that another trust fund of ten thousand dollars shall be raised out of my estate and invested at interest. And I give the interest and produce of this trust fund when and as it accrues, unto the wife of It is my will that the income of this fund, or principal sum shall, during the natural life of said either be paid into her proper hand, or upon her proper order or receipt, signed by her alone, notwithstanding her coverture. And I declare that neither the principal nor income of this fund shall be subject to the control, debts, or engagements of the present or any future husband of said the same being intended for her sole and separate use.

At the decease of said I give said principal sum or trust fund to the issue of said and in default thereof to such other person or persons as she, by a last will, or any writing in the nature of a last will, shall give, direct, or appoint the same; and in default of such appointment, it is my will that said trust fund or principal sum shall be disposed of and pass as part of the residue of my estate.

I give to an annuity of three hundred dollars, to be paid by two equal sums to said half-yearly, during her natural life.

To of in the County of widow, I give an annuity of one hundred dollars, to be paid her, during life, in quarter-yearly payments.

I also give unto of in the County of widow, an annuity of two hundred dollars, to be paid in quarter-yearly payments during her life.

I order my executor, hereinafter named, to pay of either in money, or such articles as his comfortable maintenance may require, fifty dollars annually during his life, at such times as said executor shall think proper.

To wife of of I give an annuity of one hundred dollars, to be paid during her life, quarterly.

To wife of of I give three hundred dollars, and direct three notes, held by me, signed by her husband, for one hundred dollars each, to be canceled.

To wife of of there shall be paid in money, or delivered in articles necessary for her support, at the discretion of the executor of this my will, one hundred and fifty dollars annually, during her life, at such time and in such portions as he shall choose.

I give to son of one thousand dollars, and order that he shall be charged with such amount of moneys as he shall be my debtor for, upon promissory notes at my decease.

I devise the wood-lot in which I bought of one to wife of above named, to hold to her for life, the remainder I give to the child or children of said who shall survive her, his, her, or their heirs forever.

If shall be a member of my family at the time of my decease, she shall and may continue to reside in my dwelling-house and participate in the use of the stores and furniture, in common with others of my family, for the term of six months thereafter.

It is my will that a debt of three hundred and thirty-two dollars, due me from of shall be canceled.

To each of those of the following-named persons who shall be in my service at the time of my decease, I give one hundred dollars, viz.:

My will is that all annuities hereinbefore given shall take date from the day of the probate of this will; and all legacies, not annuities, shall be paid within eight months from the same period.

It is my will that all the capital or principal sums which shall be requisite to yield the several annuities above mentioned may, by my executor, be paid to to be held and managed by said corporation as trustees under this will; or, if the said executor and the parties beneficially interested therein shall so elect, said capital or principal sums, or any of them, may be placed in the hands of such trustee or trustees as shall, upon application to the Supreme Court of sitting in chancery, be appointed to receive the same, and perform this, my will, in that behalf.

I hereby authorize and empower whoever shall assume the execution of this will, to make sale of, and convey any parcel or parcels of real estate, of which I may die seized, for the purpose of raising any and all such sums of money as shall be required for the trust funds, annuities, and legacies hereinbefore directed to be created, given, and bequeathed. All such sales shall be made by public vendue, after notice thereof shall have been given in two or more newspapers printed in the city of for the term of fourteen days at least prior to such sales being made.

All the residue of my estate, real, personal, and mixed, wheresoever it may be found, and of whatsoever it may consist, I give and devise unto to hold to him and his heirs forever.

I hereby revoke all wills by me heretofore made, and constitute the said executor of this my last will.

IN WITNESS WHEREOF, I, the above-named testator, have hereunto set my hand and seal, this day of in the year of our Lord eighteen hundred and [L. S.]

Then and there signed, sealed, and published by the testator, as and for his last will, in the presence of us, who, at his request, in his presence, and in presence of each other, have hereto set our names as witnesses.

..... [L. S.]
..... [L. S.]
..... [L. S.]

FORM OF WILL FOR REAL AND PERSONAL ESTATE.

I, of the City of County of and State of -grocer, realizing the uncertainty of life, and being of feeble health, but of sound mind, memory and judgment, do make and declare this to be my last will and testament in manner and form following, to wit:

First, I give, demise, and bequeath unto my eldest son, the sum of four thousand dollars, now on deposit in the Bank, together with my grocery store at No. street, with all the tenements and improvements thereto belonging: to have and to hold unto my said son, his heirs and assigns, forever.

Second, I give and bequeath unto my beloved wife, absolutely, the house in which I now reside, at No. street, together with all the furniture therein, including piano, organ, linen, china, the plate, wearing apparel, etc., together with ten thousand dollars in bank stock and railway bonds, now lodged in my safe; the same to be in lieu of her dower at common law.

Third, I give and bequeath to my invalid mother, the income and rents from my farm in during the term of her natural life. Said farm to revert to my sons and daughters in equal proportions upon the demise of my said mother.

Fourth, I give and bequeath unto my youngest son, three thousand dollars, also my tenement house on street, with all the improvements thereto belonging: to have and to hold unto my said son, his heirs and assigns forever.

Fifth, I give and bequeath the sum of one thousand dollars to my executors, to be equally divided between them, in full, for all services in the matter of the execution of this my last will and testament.

Sixth, I direct that debts and funeral expenses be paid from moneys now on deposit to my credit in Bank of the balance of such money, together with all the rest and residue of my estate, to my three daughters, and to be equally divided between them for their use forever.

I hereby nominate and appoint.....and.....the executors of this my last will and testament, and revoke all other and former wills made and executed by me.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this.....day of....., one thousand eight hundred and.....

(Signature of Testator, [L.S.]

Signed, sealed, published, declared, and acknowledged by the above-named testator to be his last will and testament, in our presence, and we each, at his request, and in his presence, and in the presence of each other, subscribe our names as witnesses.

(Names and residences of witnesses.)

CODICIL TO A WILL.

Whereas I,.....of the.....of.....in the county of.....and State of....., have made my last will and testament in writing, bearing date the.....day of.....in the year of our Lord one thousand eight hundred and.....in and by which I have given and bequeathed to the.....Society, instituted in the city of.....in the year one thousand eight hundred and.....the sum of.....dollars.

Now, therefore, I do, by this my writing, which I hereby declare to be a codicil to my said last will and testament, and to be taken as a part thereof, order and declare that my will is, that only the sum of two hundred and fifty dollars shall be paid to the said.....Society, as the full amount bequeathed to the said Society, and that the residue of the said legacy be given to the person who shall be acting as treasurer, at the time of my decease, of the.....Association, located in the town of.....to be expended by the Society in the purchase of books for the library of said Association; and lastly, it is my desire that this codicil be annexed to and made a part of my last will and testament as aforesaid, to all intents and purposes.

IN TESTIMONY WHEREOF, etc. (As in Form of a Will.)

FORM OF WILL, IN WHICH THE TESTATOR DEVISES ALL HIS PROPERTY TO TRUSTEES FOR CERTAIN PURPOSES

The last will of me,.....of the.....of.....and State of.....being of sound mind at the time of making and publishing this my last will and testament, I give and devise all my estate, real and personal, whereof I may die seized or possessed, to.....of the said.....of.....and.....of same place, gentlemen.

To have and to hold the same to themselves, their heirs and assigns, forever, upon the uses and trusts following, namely: In trust to pay all my debts and funeral expenses; secondly, to pay to my wife.....upon her sole and separate receipts, the interest, income, and revenue of all my said estate during the term of her natural life; and, thirdly, upon the decease of my said wife, to convert all my said estate into money, if such a

course shall be thought best by my said trustees, and pay to my daughter.....the one-third part thereof, it seeming to me best to give her so large a share on account of her bodily infirmities and inability to provide for herself, and the remaining two-thirds equally to divide between my four sons,.....and.....If either of my children shall, before such division, have died, leaving lawful issue, such issue to receive the parent's share; but if there be no issue, then such share to fall into the general fund, to be divided among the survivors in the manner before directed.

And I hereby give to my said trustees full power and authority to sell any or all of my real estate at private or public sale, and invest the proceeds, or to lease the same as they may deem best for the interest of my family.

And if my said daughter.....shall not have attained the age of twenty-one upon the decease of her mother, I hereby nominate, constitute, and appoint my said trustees guardians of the person and estate of my said daughter.....during the remainder of her minority, commending her to their fatherly care and protection.

And I hereby nominate, constitute, and appoint my said trustees,.....and....., executors of this my last will and testament.

IN WITNESS WHEREOF, etc. (As in Form of a Will.)

EXECUTOR'S BOND.

KNOW ALL MEN BY THESE PRESENTS, that we (name of the executor), as principal, and (names of his sureties), as sureties, and all within the Commonwealth (or State) of.....are holden and stand firmly bound and obliged unto.....judge of the Probate Court in and for the county of.....in the full and just sum of.....dollars, to be paid to said judge and his successors in said office; to the true payment whereof we bind ourselves and each of us, our and each of our heirs, executors, and administrators, jointly and severally, by these presents. Sealed with our seals. Dated the.....day of.....in the year of our Lord one thousand eight hundred and eighty.....

THE CONDITION OF THIS OBLIGATION IS SUCH, that if the above-bounden (name of the executor), executor of the last will and testament of (name of the testator), late of (residence of the testator), deceased, testate, shall,—

First, Make and return to the Probate Court of said county of.....within three months from his appointment, a true inventory of all the real estate, and all the goods, chattels, rights, and credits of said testator, which are by law to be administered, and which shall have come to his possession or knowledge;

Second, Administer according to law and the will of said testator all the goods, chattels, rights, and credits, and the proceeds of all the real estate that may be sold for the payment of debts or legacies, which shall come to the possessor of said executor, or of any other person for him; and,

Third, Render upon oath a just and true account of his administration within one year, and at any other times when required by said court: then this obligation to be void otherwise to remain in full force and virtue.

(Signature of executor.) [Seal.]

(Signature of surety.) [Seal.]

(Signature of surety.) [Seal.]

Signed, sealed, and delivered in presence of.....188.. Examined and approved.

(Name of Judge.)

Judge of Probate Court.



REFERENCES BY PERMISSION

— TO —

OWNERS WHO HAVE BUILT with the aid of OUR WORKING PLANS, SPECIFICATIONS, Etc.

EIGHT THOUSAND HOUSES HAVE BEEN BUILT FROM OUR PLANS, ETC.

The names of our patrons appearing on this and other pages are printed by authority of their written permission, in answer to the following letter addressed to each of them, after the completion of their buildings:

"Dear Sir:—If our work for you has proved satisfactory, will you kindly permit us to include your name in our reference list? Yours very respectfully,
"THE CO-OPERATIVE BUILDING PLAN ASS'N, 191 Broadway, New York.
"Per R. W. SHOPPELL."

Want of space admits of occasional extracts only from their replies.

We trust the giving of this partial list of our patrons will not be considered ostentatious. The excuse for it is that it is the only *thorough* way of acquainting strangers with the reliability and accuracy of our plans—a most important matter for every one who proposes to use them.

ALABAMA

T. A. Means, A. M., M. D., Montgomery.
Andrews & Co., Bankers, Lafayette.
E. M. Tutwiler, Esq., Merchant, Coalsburg.
F. C. Smith, Esq., Merchant, Greenville.
B. O. Watkins, Esq., Lumber Manufacturer, Bay Minette.
Geo. F. Moore, Esq., Attorney, Montgomery.

CALIFORNIA

Geo. W. King, Esq., Los Angeles.
S. M. Crabtree, Rohnerville, who says:
"My cottage pleases me very much, and is liked by my neighbors and all who see it."
M. R. Hook, Esq., Red Bluff, who says:
"I am more than pleased with my dwelling planned by you."
R. E. Hyde, Pres. Bank of Visalia, Visalia.
John P. Early, Esq., Los Angeles.
H. D. Reaves, Santa Barbara, who says:
"My house looks very pretty and its plan is most admirable."

CONNECTICUT

Rev. Frederick Brown, West Suffield.
Miss Kate Grant Bliss, Stafford Springs.
H. J. Pierre, Esq., Winsted.
Wm. D. Black, Esq., New Milford.
O. Vincent Coffin, Pres. Middlesex Mutual Assurance Co., Middletown.
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"I have built eleven houses in this place, some from designs by architects to whom I have paid very high prices; but none have pleased me so much as the last house, which I built from your Plans. In future I shall use them, they are cheaper and I consider them more practical than others."

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Dickson & Few, Flandrau.
Geo. E. Bowers, Esq., Hillsboro.
B. F. Ives, Esq., St. Lawrence.
Dr. N. H. Hamilton, Grafton.

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Jas. G. Eastwood, Esq., cor. Howard ave. and 17th st., Washington, who says:
"I am living in the house I built last summer from Plans and Specifications furnished by you, and will say that your work was satisfactory in every respect."
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W. G. Hanson, Esq., Mineola.

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H. M. Tanner, Esq., Rome.

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"I regard your Plans as far superior to any others I have ever received."
Fred'k Attwood, Esq., Mt. Vernon, who says:
"I consider your Plans and your publications also, very valuable. I have been greatly benefited by the plans I purchased of you."
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"The cost of our house runs under your estimate."

C. H. Hillerby, Esq., Jacksonville, who says:

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N. C. Fisher, Esq., Chicago.
Dr. Horace Wardner, Anna.
R. P. Morgan, J., Civil Engineer, Dwight.
A. M. Ward, Esq., Chicago.
W. A. Gardner, Esq., 164 Dearborn street, Chicago.
E. W. Trowbridge, Esq., Quincy, who says:
"The house gives great satisfaction, pleasing every one who looks at it. Others here, are already building from your Plans."
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E. M. Wood, Esq., Grand Crossing, who says:
"The Plans you sent me saved me a good many dollars in the construction of my house."
W. H. Edwards, 97 Clark street, Reaper Block, Chicago.

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Allison Maxwell, M. D., Indianapolis.
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"Everybody wonders where we get so much room in our house. We have entertained sixty people on several occasions, seating them all, and had room for half as many more. We have a handsome house and a very convenient one."
Geo. Webster, Jr., Esq., Marion, who says:
"You have permission to refer to me in any manner you see proper. I have a handsome and very convenient dwelling, made from your Plans, and I was well pleased with your promptness in furnishing Plans, Details, etc."
Lewis B. Sims, Attorney, Delphi, who says:
"The work of your Association in furnishing me Plans, Specifications, &c., for my house was entirely satisfactory. The house proves to be more satisfactory, now that we are living in it, than we had expected."
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C. H. Purdy, Esq., Michigan City, who says:
"The Plans proved very satisfactory. The house built from them is much handsomer than I expected. Your Estimates I found to be correct."

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E. M. Carey, Esq., Agrl. Implements, Red Oak.
L. C. Fay, Esq., Furniture, Sioux City.
G. W. Hanks, Esq., Pottsville, who says:
"I can heartily recommend your work and your Company for fair dealing."
John D. Keeler, Esq., Des Moines, who says:
"Although I did not finally build from the Plans you sent, I derived so much real benefit from the study of them that I am more than satisfied with the outlay. I can assure you of my cordial appreciation of your work."
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Jas. Alexander Leonard, Esq., Decorah, who says:
"I can most heartily recommend your Association as filling the bill complete, so far as I am concerned."
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Chas. Anderson, Esq., Eldora, who says:
"I would feel satisfied if I had paid double the price for the Plans."

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"The Plans worked out all right; the carpenter and mason had no trouble with them whatever."
H. Parmenter, Esq., Solomon.

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"I built a house after your Plans and it suits us in every particular."
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"I have just completed a house for A. W. Smith, after Working Plans furnished by the Co-operative Building Plan Association, and I cheerfully give my testimony as to their accuracy and harmony of proportions. I have built houses after their plans before and have always found their work reliable and satisfactory."
P. J. Conklin, Esq., Kingman, who says:
"We are very much pleased with our house."
J. W. Gilbert, Treasurer Eureka Irrigating Canal Co., Spearville.

A. W. Smith, Esq., Cawker City, who says:
"I am well satisfied with the arrangement and appearance of my house. I would advise all who contemplate building to first secure Working Plans. It is economy and a saving of much vexation. I append statement of the Contractor who built the house."
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"The house I erected from your Plans is not only beautiful but convenient; it is admired by all. The contractors (Jackson & Mishler) join with me in recommending your Plans to all who contemplate building."
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"My house on the bluff built from your Plans is said to be worth ten thousand dollars to the town. All are pleased with it, none more so than myself. In convenience and beauty it cannot be surpassed."

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"A great many people speak well of the Plans, and pronounce the building as one of the finest in Saco."
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"My house is completed and is admired by every one. It is a perfect little gem."

Francis Gerber, Esq., Sayville, L.I., who says:

"The Plans I received from you were all that could be desired. The builder had no trouble in working from them. The house is now completed and is acknowledged to be the most convenient, substantial and the handsomest house in our village."

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"My house is finished and causes much favorable comment."

W. J. Burtis, Esq., Granville, who says:
"The excellence of your Plans was far beyond my expectations. I have one of the finest houses in town."

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"I shall always consider myself fortunate in having purchased from you the Plans for the house which I have lately built and now occupy. The exterior is beautiful while the interior is just the pink of convenience. To those who may be interested I cannot commend your work too highly."

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Frank Dayton, Esq., Portland, who says:
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"I built a house after the Plans and Specifications you sent me, and although it cost me a little more than your estimate, I can freely say that it has given, not only me, but every one who has seen it, perfect satisfaction. It is by all odds, the handsomest house of its size anywhere in the neighborhood."

W. A. Husband, Attorney, Philadelphia, who says:

"Your work for me was entirely satisfactory, and I shall be glad to commend to your care any who may need assistance and guidance in building."

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"I have just finished my cottage at Holly Beach City, Cape May Co., N.J., according to your Plans and Specifications. It is really beautiful. The Cape May papers have had several articles of praise about it. Many have come to see it who intend building. All are unanimous in pronouncing it the prettiest cottage, of its size, on the beach."

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Robert Stevenson, Esq., Box 1070, Pittsburg.

Thos. H. Hunter, Esq., "Hotel Duquesne," Pittsburg.

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Wm. Little, Esq., Attorney, Towanda.

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J. C. Brader, Esq., Nanticoke who says:

"Your work for me has given the best of satisfaction and I can cheerfully recommend the same to those who contemplate building."

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"Your work was very satisfactory in every way and a great saving to me. I shall be pleased, at all times, to recommend your plans."

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"The excellence of your Plans was far beyond my expectations. I have one of the finest houses in town."

E. F. Beadle, Esq., Cooperstown.
A. Austin, Supt. Schenectady Elevator, Schenectady, who says:

"I am much pleased; there are houses in my immediate neighborhood that have cost much more money, but they do not dispare mine in the least; it stands there and speaks for itself."

Henry C. Beebe, Esq., Morris Park, L. I. (Richmond Hill P. O.), who says:

"I shall always consider myself fortunate in having purchased from you the Plans for the house which I have lately built and now occupy. The exterior is beautiful while the interior is just the pink of convenience. To those who may be interested I cannot commend your work too highly."

Dr. John N. Tilden, Peekskill-on-Hudson.
Wm. A. Sloane, Esq., Port Richmond, who says:

"I built my house for the price named in your book. Every body likes it."

Mrs. Joseph Gorman, Coney Island, who says:

"Highly pleased with my plans."

J. W. McKnight, Esq., Castleton.
A. Holland Van Vorst, Esq., Utica.
C. E. Dobbs, Esq., Poughkeepsie.
John T. Cowles, Esq., Ridgewood, L. I. who says:

"The house I built will stand comparison with other houses in this town that cost two or three times the money to erect."

Henry Orvis, Esq., Plattsburg.
A. E. Rother, Esq., 162 William street, Buffalo.

B. G. Sammis, Esq., Huntington.
H. Greenfield, Esq., Moravia.

J. E. Paxson, Esq., Akron.
W. W. Turley, Esq., Hudson.
T. N. Shattuck, Esq., Piffard.

NEBRASKA

C. F. Madsen, Esq., Kearney.
W. E. Peebles, Banker, Pender, who says:

"I take great pleasure in saying that I used one of your Plans, and I am more than satisfied with the result. I have a beautiful dwelling, costing not more than an ordinary building, but worth twice as much, either to sell or live in, on account of its convenient interior and its beautiful exterior."

John G. Rain, Esq., Florence.

Fred. D. Williams, Esq., Rising City.

Frank C. Condon, Esq., Banker, Arapahoe.

John Cattle, Jr., Banker, Seward.

R. J. Finch, Esq., Arapahoe.
J. L. Pierson, Esq., Omaha.
J. T. Thompson, Esq., Fairburg.
L. E. Niles, Esq., Pierce.
W. G. Clark, Cashier City National Bank, Hastings.

Geo. J. Burgess, Esq., Arapahoe, who says:

"I am very well satisfied, the house is a daisy—looks nicer than it did in the engraving."

NORTH CAROLINA

F. S. Royster, Esq., Commission Merchant, Tarboro.
Jacob Battle, Attorney, Rocky Mount.
J. W. Murchison, Esq., Wilmington.

NEW MEXICO

G. A. Rothgeb, Esq., Las Vegas.
Norman C. Raff, Esq., Albuquerque, who says:

"You are at liberty to use my name. I built two houses from your Plans, and they give excellent satisfaction."

OHIO

J. U. Lloyd, Esq., Manufacturing Chemist, Cincinnati.
H. P. Weddell, Esq., Cleveland.
O. D. Pickett, Esq., Shelby.
Chris. Erbeck, Esq., Mason.
Wm. M. Lowther, Esq., Findlay, who says:

"I shall always deem it a pleasure to impart information to all who make inquiries concerning your Association, with whom I have had the pleasure of doing business, and the prompt manner in which you responded to my recent order."

Chas. H. Stewart, Esq., Norwalk.
B. Armstrong, Esq., East Claridon.
E. B. Dennis, Attorney, Newark, who says:

"The house built from the Plans procured of you is satisfactory, and is very much admired. The house could be built here for considerable less than your estimate."

Hess, Snyder & Co., Massillon.

H. T. Raymond, Esq., Cambridge.

W. C. Wells, Esq., Newark, who says:

"Your work for me has given perfect satisfaction."

S. J. Wright, M.D., Tallmadge.

M. R. McGill, Esq., Cincinnati.

Chas. Colahan, Esq., Cleveland.

M. D. Harter, Esq., Mansfield.

H. R. Hislop, Esq., Columbus.

W. L. Thompson, Esq., East Liverpool.

Saurer & Postel, Lumber, Orrville.

George H. Bonte, Esq., Cincinnati, who says:

"The Plans were satisfactory in all respects. Your estimate of cost was very close. I have the finest, prettiest and best built house in South Norwood, and many parties say within many miles of it, and that is saying a great deal; it is acknowledged to be the finest and best of the three or four hundred houses that are in the neighborhood."

OREGON

Philip R. Bishop, Esq., Baker City.

Frank Dayton, Esq., Portland, who says:

"I am exceedingly well pleased and have a lovely cozy little home that is much admired."

PENNSYLVANIA

E. Payson Porter, Esq., Statistical Sec'y Int. S. S. Convention, 725 Chestnut street, Philadelphia, who says:

"It gives me pleasure to say that the cottage built after the Plans you sent me, and which we call Sylvan Lodge, is not only satisfactory in every respect, but charming."

W. C. Downing, Esq., Penn. R.R. Offices, Philadelphia.

Henry R. Edmunds, Attorney, Philadelphia, who says:

"I built a house after the Plans and Specifications you sent me, and although it cost me a little more than your estimate, I can freely say that it has given, not only me, but every one who has seen it, perfect satisfaction. It is by all odds, the handsomest house of its size anywhere in the neighborhood."

W. A. Husband, Attorney, Philadelphia, who says:

"Your work for me was entirely satisfactory, and I shall be glad to commend to your care any who may need assistance and guidance in building."

Rush Taylor, Esq., Bustleton, Philadelphia.

Louis Restein, Esq., Philadelphia, who says:

"I have just finished my cottage at Holly Beach City, Cape May Co., N.J., according to your Plans and Specifications. It is really beautiful. The Cape May papers have had several articles of praise about it. Many have come to see it who intend building. All are unanimous in pronouncing it the prettiest cottage, of its size, on the beach."

Rev. H. L. Chapman, Esq., 36th Ward, Pittsburg.

Robert Stevenson, Esq., Box 1070, Pittsburg.

Thos. H. Hunter, Esq., "Hotel Duquesne," Pittsburg.

Wm. L. Abbott, Supt. Union Iron Mills, Pittsburg.

Wm. J. Bleakley, Esq., Franklin.

Henry McCormick, Esq., Harrisburg.

T. M. Nelson, Esq., Engineer, Chambersburg.

Wm. Little, Esq., Attorney, Towanda.

L. R. Frost, Esq., Furniture & Lumber, Towanda, who says:

"I give you permission to use my name in any way to help on the good work of building artistic houses. The house you designed for me last fall is about completed, and is admired by every one. I find your book, 'How to Build, Furnish and Decorate,' a great help. Several parties that contemplated building have had the use of it, which will probably give you several orders."

H. Gardner, Esq., Carlisle.

Theodore Van Dusen, Esq., Merchant, Houtsdale.

J. G. Lloyd, Esq., Ebensburg.

D. W. Hess, Esq., Scotland.

Jas. E. Nice, Esq., Jersey Shore.

Mrs. J. M. Turner, Blairsville.

Wm. E. Wolfe, Esq., Nanticoke.

D. E. Albert & Bros., Merchants, Youngstown.

W. E. Bigham, Esq., Sharpsburg.

C. T. Pugh, Esq., New Brighton.

J. K. Mitchell, Esq., Washington.

Mrs. B. H. Boom, Hatboro.

G. B. Mathewson, Esq., Factoryville.

E. T. Long, Esq., Wilkes-Barre.

O. Perry Jones, Esq., Philipsburg.

U. G. Schoonmaker, Esq., Scranton, who says:

"Your work is of inestimable value to any one contemplating building."

H. V. L. Meigs, Supt. Penn. Bolt and Nut Co., Lebanon, who says:

"Your Plans, details, &c., were very full and concise—in fact, entirely satisfactory."

Geo. T. Huff, Cashier Greensburg Banking Co., Greensburg, who says:

"We built the cottage according to the Plans you sent us. We like it very much and it has been greatly admired by others."

J. C. Brader, Esq., Nanticoke who says:

"Your work for me has given the best of satisfaction and I can cheerfully recommend the same to those who contemplate building."

John J. Houghton, Cashier First National Bank, Ambler, who says:

"The Plans purchased from your Association have been used in building six houses. The Plans were very satisfactory and the houses present quite a new style of architecture in our neighborhood. They make beautiful houses at a moderate cost. I am satisfied that your Association is of great benefit to all who intend to build. I willingly add my name to your list of references and heartily commend your work."

Geo. B. Markle, Banker, Hazleton.

Jas. L. Cravens, Esq., Pittsburg.

Van Tassel Bros., Du Bois.

E. R. Gross, Esq., 5 South Front street, Philadelphia.

C. S. d'Inviillers, Esq., Philipsburg.

Rev. H. D. Waller, Pittsburg.

John A. Schuchart, Pittsburg.

Wm. Montooth, 18th Ward, Pittsburg, who says:

"We feel perfectly satisfied with the work done for us."

George H. Drake, Esq., Old Forge.

Francis Weiss, Esq., Bethlehem.

Benjamin Crowther, Esq., Upland, Del. Co., who says:

"Your architectural work for me has been very satisfactory not only to me, but to others who saw my house in the course of erection. One of the largest property owners said to me: 'I have been through your house from cellar to attic and think it very complete; it must have cost a deal of thought to arrange everything so well. It is an ornament to our town.'"

Isaac Post, Esq., Scranton.

F. E. Smith, Esq., Tioga, who says:

"I have built country houses, barns, &c., a great number. I have never had plans, specifications and full details that I was so well pleased with as with yours."

John Lucas, Esq., Philadelphia.

R. F. Livermore, Esq., Corry, who says:

"Your work was very satisfactory in every way and a great saving to me. I shall be pleased, at all times, to recommend your plans."

H. Holbert, Esq., Harrisburg.

P. Wagner, Esq., Sharpsburg.

H. N. Miller, Esq., Freeport.

Frank S. Riggs, Esq., Clifton Heights, who says:

"The Plans I used worked out very nicely, and the house is greatly admired."

Dr. W. L. Lowrie, Tyrone.

P. D. Timlin, Esq., Minooka.

RHODE ISLAND

Fred V. Fuller, Esq., Providence.

Albert Caswell, Esq., Newport.

Geo. Batchelor, Esq., Woonsocket.

SOUTH CAROLINA

M. L. Carson, Esq., Aiken, who says:

"The Plans I ordered were not for myself, but for a friend, who is absent at this time; therefore, I cannot say the owner's name, but I will say that the Plans gave perfect satisfaction in every detail and particular."

Dr. F. A. Waddill, Cheraw.

TENNESSEE

L. F. Jeanmaire, Esq., McMinnville, who says:

"I am delighted with my house. It has received many flattering praises."

James F. Lukens, Esq., Union City, who says:

"I was well pleased with the Plans, and consider their cost as money well spent. I have the handsomest and best business house in this city. I take pleasure in referring to your Association all parties here that I find are going to build."

O. A. Knight, Esq., Pomona.

TEXAS

Geo. Smith, Esq., Galveston, who says:

"I built according to your Plans, and am much pleased with the result. I certainly saved \$125 by having your Plans and Specifications."

F. M. Robinson & Co., Denison.

E. Raphael, Esq., Houston.

J. D. Crook, Esq., Paris.

John W. Phillips, Attorney, 513 Congress avenue, Austin.

Robt. Moss, Esq., Plano.

Wm. H. Sinclair, Esq., Galveston.

T. B. Yarbrough, Esq., Honey Grove.

VERMONT

E. D. Blackwell, Esq., Banker, Montpelier, who says:

"I built a house in Florida from Plans procured of you. Everything was as represented, and I am well pleased."

Ross White, Esq., Brattleboro, who says:

"The Plans you supplied for my house have been more than satisfactory in every respect. I have been the means of your getting three orders in this town and shall be glad to have you refer to me at any time."

VIRGINIA

Carson & Sons, Makers of Lime, Brick, etc., Riverton, who say:

"We regard your Association as doing a work of great value to the public, and you can use our name as a reference. We have used one of your Plans. It is the most noticed house in the village, and it is as good as it is attractive."

WEST VIRGINIA

Rev. F. K. Leavell, Crescent.

J. C. White, Esq., Morgantown.

WISCONSIN

R. W. Maguire, Esq., Milwaukee.

H. Goodrich, Esq., Durand.

J. T. Zonne, Esq., Sheboygan Falls.

W. G. Weeks, Editor *Republican*, Delevan.

T. J. La Flesh, Esq., Nevins.

J. A. Allen, Esq., Shawano, who says:

"The Plans we received from you we used for a parsonage, and I must, in justice, say that they gave entire satisfaction in every particular."

WASHINGTON TERRITORY

Chas. S. Boyer, Esq., Spokane Falls.

Mrs. M. W. Fulton, Seattle.

WYOMING TERRITORY

Frank Bond, Chief Draftsman Surveyor General's Office, Cheyenne.

CANADA

Sir A. A. Dorion, Montreal.

F. & J. Skelding, Neepawa, Manitoba, who say:

"You can use our name. We found everything exactly as required in the Plans sent us—Drawings and Specifications all perfect."

Jacob Bingay, Esq., Yarmouth, Nova Scotia.

Rev. David F. Bogert, Belleville, Ontario.

H. B. Wright, Esq., Brockville, Ont.

Baker & Co., Rat Portage.

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